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The Berlin Art Exhibition.

THE German mind is nothing if not logical. The International Art Exhibition now open at Berlin has therefore a logical basis. The Government of Prussia and of course the people of Berlin desire that this city shall be, if possible, to united Germany what Paris is to France, that it shall be, not only the chief town of Prussia, but the metropolis of Germany. Stirred by this laudable ambition they are determined to spare no effort to realise their desire. Now, if the people of the various States forming the German empire, who have been wont to regard Dresden, Munich, Stuttgart, and other towns as their capitals, are to be weaned from their former ideas and yield allegiance to the supremacy of Berlin, it is evident that they must be induced to visit that city, and so become impressed by all the evidences of superiority with which the Berliners are endeavouring to hall-mark their town. To furnish an inducement for such visits, annual exhibitions of general interest are held in what is called the Landes-Ausstellungs Park, a prettily-laid-out garden, of considerable extent, situated in the Moabit quarter, and including a series of lightly-constructed exhibition buildings of iron and glass, in which the displays are located. The park is the property of the Government, who let out the premises on hire to any persons or societies who may wish to speculate in exhibitions.

This year the Society of Berlin Artists, Verein Berliner Künstler, assisted by subsidies from the Government, the Emperor, and others, have organised the present exhibition. As the control of the Society is, like that of our own Royal Academy, practically in the hands of the painters in oil, it is hardly surprising that oil-painting, as in the Academy, swamps the work of sculptors, architects, engravers, and water-colour painters. A really fine collection of European oil-painting, that of France excepted, save so far as the predominant influence of France is concerned, has been gathered together in the present exhibition.

Naturally enough, German work predominates in quantity, compared, that is, with the work of any other individual country, and of German work that of Berlin also naturally enough occupies the greatest space. All the world knows that political feeling has caused the abstention of France, but it is doubtful if that abstention is very deeply regretted in the innermost thoughts of the rulers of Berlin. The provincial German visitor is far more likely to obtain an impression of the superiority of Germany in general, and of Berlin in particular, from the present exhibition, than if France and Paris were fairly represented.

Sculpture, engraving, water-colour, and architecture, as we have noted above, take quite a secondary place, both as regards quantity and quality, to that held by oil-painting. The architectural portion of the Exhibition in particular is somewhat disappointing. Although the large size of many of the drawings causes them to occupy a slightly greater space, perhaps, than is given in the architectural room of our own Royal Academy, the number of the drawings is hardly more than we see there annually. To imagine that this is an adequate representation of even German architectural art is ludicrous to a degree, and still more absurd is it to suppose it an international architectural exhibition. With England, at present at any rate, America, France, and Austria unrepresented in architectural art, the inadequacy of this part of the collection is self-evident.

The Italians and the French have shown us that an architectural exhibition can be made both interesting and international, but the present example in Berlin can scarcely claim to be to the fullest extent either one or the other. The older members of the architectural profession in Germany are understood to be averse to exhibiting their work, and although Messrs. Ende & Böckmann, who are certainly *primi inter pares* amongst the seniors, are represented, it is noteworthy that they only send illustrations of their work in far-off Japan, and not a single example of the large amount of work, and good work too, which they have carried out in Germany or even in Berlin. It can hardly be that the men of the highest reputation fear to jeopardise that reputation by showing their work, side by side, with that of their younger brethren. Nor (still more unpleasant to contemplate) is the abstention due to a lurking dread that German architectural art might be found wanting if fairly pitted against that of other countries.

A prudential reason leads the foremost German architects to keep dark the precise detail of their unexecuted work. If this is not done interference from certain high quarters is apt to occur, and certain favourite sculptors and others may be saddled upon the architect to the detriment of his freedom and control. Hence the German architect, entrusted with an important commission, not only does not make his design more public than he can help, but also takes care not even to allow the builder to hold a complete copy of his drawings. Such prudential considerations need not however, one might suppose, prevent the exhibition of drawings, photographs, and models of completed work, which could not fail to be of interest to the many admirers who are unable, in these busy times, to visit every important architectural work.

Si monumentum quæris, circumspice, may be a sound enough principle as applied to architectural art in its highest sense; for it is perfectly true that within the walls of an exhibition we cannot gather the actual works of the architectural artist as we can those of the painter or sculptor or engraver, but only a more or less faithful representation of them, which may lend a fictitious attractiveness, or, on the other hand, may fail to do justice to the actual work. Still, in spite of the initial disadvantage, the benefits of comparison are sufficient to justify a thorough and earnest attempt to gather together a collection that should be really international, and representative of the best work of all countries. Especially interesting would this be as showing the awakening that one cannot but notice, and the strides that are being made everywhere in architectural art, particularly amongst the younger men.

The Germans have a well-deserved fame for skill in organisations, and, if the seniors of the architectural profession would but lay aside their scruples and apply their best energies to the task, Berlin might show an international exhibition of architecture that should be worthy of the art and truly international. Although, however, this Exhibition

cannot be considered fairly representative of the architectural art of Germany, there is much that may be learnt from it as to the tendency of the men who will be the future exponents of architecture.

The first notable point is that the Schinkel era of strict classicality has now passed away. The younger men are seeking their inspirations from a study principally of their own national architecture, both that of the Renaissance and that of the Mediæval periods of German work. At the same time there is sufficient evidence to prove that this is not all that they study, but that the best work of Greece, of Rome, and of the Italian and French Renaissance is earnestly and carefully studied. There is, too, a notable absence of slavish copying of any old work, although the origin of the *motifs* that have actuated the production of the various designs can often be distinctly traced. The originality may sometimes be a little lacking in discretion, but even this is better than the absence of originality or the adherence to cold and correct work that has, till lately, been so markedly characteristic of German architecture during this century.

Interesting, as showing what power of design is possessed by the designers when a fairly free scope is allowed for their inventive ingenuity, are the few competition drawings of the large number submitted for a national memorial to the Emperor William I., proposed to be erected at the entrance to the Thier-garten opposite the Brandenburg Gate. One of the most elaborate of these is that by Paul Martin Otto, of Berlin, whose design has a central hexastyle propylæa, of the Corinthian order, surmounted by an attic and with semicircular wings. Above all is a bronze statue of a winged figure of Victory or Fame, with wreaths in each hand. In front of this propylæa is the equestrian statue of the Emperor in bronze, and at a lower level are standing bronze figures of Bismarck and Moltke. Surrounding the high level on which is the Emperor's statue, and enclosing the propylæa at the sides, is an Ionic peristyle with the walls decorated with paintings of the most important battles of the Monarch's life. Around this again, at a still lower level, is an open dome peristyle, which would form the real foot entrance to the park. The whole design is enriched with sculpture, bronze quadrigas, and a wealth of Classic ornaments, but does not appear overladen, and setting aside the cost, which would be considerable, forms a satisfactory memorial. The great difficulty in such a design as this, that of making the architectural setting sufficiently monumental without swamping the chief statue, appears to be here successfully met. The statue stands out well, and fairly holds its own, while the architectural portion of the design is monumental to a degree. The elevation is tinted in Indian-ink and shaded, the perspective coloured with considerable skill, body-colour being freely used.

The design by Bernhard Schaede for the same work is of less elaborate character, consisting of a circular colonnade leading to and connected with a central archway, which is surmounted by a flat dome. The design makes use of the Corinthian order, with plenty of sculpture, but hardly rises above the commonplace, while the statue of the Emperor is too small and inconspicuous. The design is shown in a perspective ink drawing, spirited and rapid in execution, and called a sketch in the catalogue.

A somewhat similar design by A. Mirkorszky, save that the semicircular colonnade is prolonged by a straight continuation, is shown in a vigorously-drawn, coloured perspective, and a tinted Indian-ink elevation.

The design by Ewald Becher differs from the last two in making the arched entrance the centre block of a quadrangle, the opposite side of which is partly open with flanking returns to the colonnade forming the quadrangle. In the centre of the enclosure is the Emperor's statue. This design, shown in a coloured bird's-eye view, though free from any trace of affectation or vulgarity, lacks vigour and suitability.

Bruno Schmitz sends a design submitted in this competition, which is chiefly notable for the style of the designer's drawing. The design follows the semicircular colonnade plan, save that the central archway is not pierced, as in most designs, but is the proscenium to a semicircular niche.

This gentleman is represented by a number of drawings, showing designs submitted in various competitions for memorials to the great Emperor, which are remarkable for the manner of their execution. They are of immense size, ranging from 80 to 100 superficial ft. in area, showing the designs in perspective to a large scale with the surrounding landscape. The architectural part is first drawn in Indian-ink, with a bold line and somewhat roughly; then the drawing is finished, in what is really a masterly manner, in charcoal or crayon, forming, indeed, diagrams rather than examples of the ordinary architectural perspective. Schmitz, who is one of the younger men of the profession, prepares these cartoons with great rapidity, and has been remarkably successful in the competitions for the memorials which form the subject of these designs. This style of representation is undoubtedly a suitable one for this particular class of design, where a consideration of the main features of the landscape has an important bearing on the fitness of the design for its position. In his designs, Schmitz shows as much originality and daring as in his draughtsmanship. Classic Greek Doric features are combined somewhat skilfully with Romanesque and Early Gothic forms, or, perhaps, one might rather say the designs show a Doric massiveness and directness of treatment which brings them into a certain affinity to the virility of both the Classic Greek Doric and the Early Gothic, whether round-arched or pointed. In masculine force of conception these designs somewhat remind us of Burges, without, however, the grace and the mastery of detail that Burges possessed.

Largeness of scale marks most of the drawings submitted in competition for many of the smaller memorials, though none are so tremendously big as those of Schmitz. Thus, the design of Hermann Stiller, of Düsseldorf, for the memorial in the Rhine Province, is shown in a large tinted perspective. The design goes on the familiar lines of a colonnade, here of the Ionic order, with central arch, and an equestrian statue of the monarch in front, whilst above all is the figure of Germania.

The first prize design for this particular memorial is that by Jacobs and Wehling, also of Düsseldorf, and is here exhibited. This has a screen wall at rear, backing up against the slope of the Drachenfels, with a hexastyle Greek Doric colonnade, the entablature of which supports an immense and massively-treated semi-circular arch of rusticated masonry. In the tympanum, enclosed between the arch and the entablature, is a large coloured picture, presumably in mosaic. In front, on a raised terrace, is an equestrian statue of the Emperor, and below this terrace a fountain, with a female figure, possibly to represent the Rhine, in a quadriga, the horses of which are prancing over the fountain-basin in very vigorous style. Around the fountain ascend curved steps leading to the terrace, on which stands the Emperor's statue.

Two other designs by Jacobs and Wehling, for similar competitions, are also hung, the one for Düsseldorf, and the other for Essen. Both of these show some originality and vigorous sculpturesque accessories, and are represented in powerfully-coloured perspectives. In the one a rectangular Doric pedestal, with battered sides, supports an equestrian statue of the Emperor wresting a flag from a falling Frenchman, the horse of the monarch rearing over a confused mass of prostrate horses, cannon, and combatants. On the verge of the pedestal a Prussian eagle is victoriously driving that of the French down the side, the latter sprawling in ignominious defeat.

The second design shows a Corinthian column with entablature complete, a by no means original or admirable conception, but relieved from insipidity by the remainder of the design. Above the column is the German eagle triumphing over a French snake, which is winding around the column. At the base is a female figure of Fame holding a wreath above the imperial crown, and at the foot under the crown, which is supported on a corbel, is a sloping shelf, where a standing figure could have stood under the crown, but which carries only a funeral wreath. The sentiment is thus somewhat forced in effect, and the taste somewhat doubtful, but the treatment in both cases shows a spirited feeling of design.

Messrs. Jacobs and Wehling also send a sheet, possessing considerable interest, containing as it does a number of sketches for various architectural designs, chiefly interiors, drawn for the most part on toned paper, and delineated in pen and ink, with tinting or in colour.

A series of sketch designs by Otto Rieth, of Berlin, is of somewhat similar nature. These are chiefly of pen-and-ink, tinted in ink or in pencil, and coloured, where they show, as many of them do, ideas for internal coloured decoration. These drawings or sketches are almost universally in perspective, and are evidently red-hot impressions of the first conceptions of the designer. It is interesting to notice that the light-and-shade arrangement is evidently of primary importance in this artist's mind, the detail being only most roughly indicated. Where the design is in colour, this it is that has the prominence,—the colour is fully indicated in mass, the detail of the drawing left.

The designs by Messrs. Ende and Böckmann, for the public buildings of Tokio, in Japan, are of considerable interest. First we have the original designs, shown in excellent coloured perspectives, which, in accordance with instructions received from the Japanese government by the architects, are in Renaissance, the design for the Law Courts being in Italian Renaissance of yellow brick and stone, with slate roofs of German character, imparted by a use of the bulbous form and other national roof-lines. The design for the Houses of Parliament is Palladian in general treatment, with a central dome and some eighteenth century German cupolas. The drawing indicates a stone building with green copper roofs. The remaining design of this series shows the Ministry of Justice. This is in a combination of Palladian and German Renaissance, intended to be carried out apparently in yellow brick and stucco, with slate roofs.

After the completion of these designs—which, by the way, illustrate the eclecticism of modern German architectural design, and are by no means unworthy of their authors,—a change of government occurred in Japan, with the result that the architects were instructed to re-model their design, so as to incorporate more nationality into the scheme.

This explains the second designs for these buildings, which are shown by elevations, and attain a certain amount of old Japanesque feeling by the treatment of the roofs and the clever modification of German and Florentine Renaissance, which is used for the design of the walls. These designs are to be credited to Messrs. Ende and Böckmann's chief assistant, who has since died.

A further change of government has, however, led to the abandonment of these second designs in favour of a more strictly European style, which is certainly a matter for regret, as the designs in old Japanesque are both clever in themselves and more faithfully represent the present state of Japanese national life, in which, however, the various conflicting elements are frequently blended with far less incongruity than is seen in these designs.

Public buildings in Germany itself are represented by competition drawings for various projects, such as the Law Courts at Bremen, where, naturally, German Renaissance pure and simple, or as pure and simple as German

Renaissance can be, is the favourite style, and is very well treated, with a thorough comprehension of its capabilities and qualities. Examples of such designs are the drawings by Rudolf Wirth. Of somewhat similar character is the design by Ludwig Klingenberg, for a Rath-haus at Leer, in which the German Early Renaissance style adopted is well treated, and shown in a coloured perspective. Wirth's design for a Rathskeller at Halle is another good example of the successful handling of the national Early Renaissance.

In opposition to this national class of design is such an illustration of ornate Neo Grec, with its large amount of French feeling, as we see in Carl Zehnder's design for the Parliament House at Strasburg, of which an elevation, longitudinal section, and perspective are exhibited.

There are to be seen in the Exhibition several designs for banks, both in Berlin and in other towns of Germany. For the most part, a stately and dignified version of Italian Renaissance seems to be preferred in their design; but there are occasional instances of departure from this general rule. Thus Wilhelm Martens shows perspectives of his designs for the Deutsche Bank in Berlin, and for a branch of the same bank at Bremen, both of which are in Italian Renaissance, while the same architect's designs for banks at Breslau and Reichenberg are in freely-treated adaptations of Early French Renaissance. We should mention a well-executed model in plaster of the design for the Bremen branch of the Deutsche Bank, in which the architectural detail, and even the forms of the mouldings, are executed with remarkable precision and skill. There are a few models in the Exhibition, of which this is one, and they all have the same characteristic of careful and accurate execution.

The use of models is one of the points in which modern German architects have an advantage over ourselves. All important buildings are carefully worked out in models before execution, some to a very large scale, as, for example, the Imperial Houses of Parliament now being erected in Berlin, which have been modelled full-size before being carried out.

Thoroughly good specimens of the stately and dignified use of Florentine Renaissance are the designs of Max Hasak, for the Reichsbanks at Leipzic and Aix-la-Chapelle. Other examples of skilful design in street architecture are the drawings by Heinrich Munk, in Italian Renaissance of Venetian character, one façade showing the wall space of the third storey and a high frieze above it, decorated in colour.

In strong contrast to these Italian designs is such a building as the residential flats for Rostock, by Möckel, where the red-brick architecture is based on that of Pomerania,—one more example of the present tendency to adaptation of old German styles to modern uses. Other instances of the same tendency, though in a somewhat different direction, are the designs based on German Late Renaissance or Barock, such as those by Alterthum and Zadek, and by Schilling, of Dresden, for shops and flats.

In detached houses or villa residences, of which only a few illustrations are shown, we find freely-treated adaptations of German Renaissance for the most part, occasionally modified by cockneyism of *fin de siècle* type.

Otto March, who shows some good work in domestic design for villa residences, has apparently not found the wealth of old German work sufficient for his eclecticism, but has endeavoured to follow, at a distance, some of our best English designers. The ideas, apparently, are only obtained from the study of illustrated books or journals, and the effect of inspirations drawn in this way from the work of Norman Shaw and Collcutt, mixed with that of Waterhouse, and Germanised, is amusing,—to an Englishman at any rate.

Another example of inspiration from British sources, though far more successfully carried out, is a design by Axel Guldahl, for a banker's house in Norway, in which the Scottish Baronial style has furnished many of the motifs and details.

In ecclesiastical architecture the most important design exhibited is that by Ernst Klingenberg, for the Cathedral of Berlin. This premiated design shows a large domed church, dodecagonal on plan, with buttresses, having traceried openings of upright form at the angles. The style adopted is Venetian Gothic, and the design is shown in a tinted perspective drawing.

The design by Ludwig Klingenberg for the cathedral of Bremen endeavours to incorporate the features of various periods of German Gothic, from Romanesque to fourteenth century. Thus the west front has four semi-circular Romanesque arches, forming the portals, while the two towers are Romanesque below, and gradually develop into early-pointed work and thirteenth century spires above. The nave and aisles are shown in a second perspective with windows of late thirteenth and fourteenth century German Gothic forms. The designer's idea has evidently been that, as we are the inheritors of all the ages, we are at liberty to use our inheritance as we please, and since we admire the charm possessed by many an old cathedral which has gradually grown under the hands of successive generations of artists, each developing the style and treatment of their predecessors, so we cannot do better when we are about to build a modern cathedral, by contract, with penalties for non-completion and so forth, than go as near as we can to the result achieved by past ages.

Ludwig Klingenberg also sends his second prize design for the garrison church at Strasburg, illustrated by photographs. These show a cruciform church with a central octagon, the design being based on early German Gothic in style. The design is marred by the unsatisfactory treatment of the roof of the central octagon and the flêche upon it, which is both too small and does not sit well upon the roof. The front is spoilt by the open arcade between the towers over the narthex, which looks very thin and unhappily weak.

Other church designs exhibited are mainly interesting as examples of the attempts of the German architects to modify and adapt the Mediæval Catholic type of plan to the requirements of Lutheran worship. In this, as in other Protestant churches, the sermon is of the principal importance, and, therefore, a church plan which facilitates the seeing and hearing of the preacher is the desideratum to be aimed at.

The general idea of meeting the problem is to adapt the traditional transeptal plan with nave and aisles of Mediæval times, and to enlarge the area at the crossing, somewhat on the principle to compare small things with great, of the octagon at Ely or the general Italian treatment as at Florence and Siena, and elsewhere. In external design, the modern German architect masks his central area under the roofs of nave and transept, or he makes his central area large by the use of very wide nave and transepts with very narrow aisles to the nave.

August Orth sends designs for the Himmelfahrt, Emmaus, Gethsemane, and Frieden Churches in Berlin, and the Church at Gundsfeld, near Breslau, which are various illustrations of attempts at solving the problem of a Lutheran Church. The Himmelfahrt Church is also shown by a plaster model which well explains the grouping of the design, and expresses the detail of the North Italian round-arched Gothic style adopted.

Johannes Otzen, whose work is not unknown in England, exhibits his design for the Reformation Church in Wiesbaden, planned with a square central area, with semi-octagonal transepts, externally treated as nave and transepts, with two western spires and towers. To an English eye this design lacks length, and is too much bunched up to be satisfactory. This fault is avoided in the same architect's design for the Lutheran Church in Berlin, which, with a central square, semi-octagonal transepts and east end, combines a wide nave with narrow aisles of fair length. This design includes a single tower and spire at the north-east angle of the plan. Like many of the Lutheran churches, this design has galleries to nave and central area,—another concession to the exaltation of the sermon.

In Catholic churches, as for example the new cathedral church in Moabit, by Weibertz, the Mediæval type of plan is more closely followed, as might be naturally expected. The style employed for this design is an adaptation of the North German brick architecture, which we, in England, generally regard as Pomeranian.

Theatres are not well represented in the exhibition. Indeed activity in this branch of architectural design has scarcely commenced in Germany, or at any rate in Berlin, and there is a future for the theatrical specialist. Berlin has several theatres it is true, but the Lessing Theatre,* built in 1888, from the designs of van der Hude & Hennicke, is the only one with the slightest architectural pretensions. The majority are utterly unworthy of a city like Berlin, and many are not even safe for their audience.

H. Seeling shows a design for the theatre at Essen won in competition, a by no means first rank example, and another for the Stockholm Court Theatre, a most important work, severely and suitably treated in a French modern classic style.

Carl Hülse sends plan, elevations, and perspective of the Concert-house or Casino at Hamburg, and also photographs, principally internal, of the executed work. These show the design to be another example of the modern eclectic spirit of German architectural design. The external treatment is a mixture of ornate Renaissance work of various styles. The ground-floor is carried out in a Florentine rusticated manner: the first floor adopts the Venetian type of Renaissance, while the gables follow the Early German Renaissance. The interior is executed also in varied treatment, the finishings being of an elaborate and costly character.

From Munich, besides some purely architectural drawings, of which the design by Georg Hauberrisser for the Rath-haus at Wiesbaden, a well-treated example of Early German Renaissance, is about the best,—Heinrich V. Schmidt sends some remarkable perspectives, and, still more notable, an elevation to large scale, executed in oil-painting by Ferd. Wagner, examples of whose work some of our readers may remember to have seen in the old Tivoli restaurant in the Strand.

A design which has been thought worthy of representation in the illustrated catalogue must be mentioned. This is a clever adaptation of round-arched German Romanesque to the purpose of a circular water-tower at Worms. The design is by Karl Hofmann, and derives much of its merit from a lofty roof and small staircase turret on one side.

We may now pass on to the international part of the architectural room. The most important contribution to this very small collection is from Russia; most important, comparatively, that is, both from the number of the works and the position of the exhibitors. The Russian drawings are mostly small in scale though not in subject, and treated with brilliant colour.

L. Benois sends two alternative designs for a church in Wladimir, both treated with red brick, yellow stone, and green copper roofs in the national Russian style, which one can perhaps best briefly describe as a developed and specialised form of Byzantine. The same architect shows a design for the grand stand and office buildings for the racecourse at St. Petersburg, and the third prize design in the competition for the Sühne-Kirche at St. Petersburg, which is in a Baroco style with roofs of typical Russian domical form.

Professor A. Tomischko sends the first prize design for the Sühne-Kirche, a cleverly-treated, excellent adaptation of Byzantine, with a large central dome. The design is shown in a splendidly-coloured perspective, and the whole work is one of the highest quality in the exhibition. The same artist

* Illustrated in the *Builder* of March 15, 1890.

also sends a design, in conjunction with F. Haberzethel, for the poorhouse at Wolkow, which is a fusion of Russian and Florentine Renaissance.

Professor V. Schroeter is represented by his design for the imperial opera-house at St. Petersburg, shown in tinted elevation and photographed plan. The style adopted is a Palladian treatment of Renaissance, and character is imparted to the design by the treatment of the high-domed roof over the stage and a lower roof over the auditorium. Professor Schroeter also sends his fourth prize design for the Sühne Kirche, somewhat similar to that of Professor Tomischko, but treated with alternate bands of buff and grey stone. Schroeter shows also his second-prize design for the Memorial Church at St. Petersburg, a brightly-coloured Russian domed design, with a single western tower and spire, with green copper roof. This architect's design for a cathedral at Orenburg also follows the traditional Russian style, and in the perspective appears pleasingly grouped, with central dome, and western tower and spire. The design by Professor Schroeter and J. C. Küttner for the Marian-Kirche at St. Petersburg is a change from these more important examples, and shows a wooden building with slate roofs of uncouth form.

L. Urlant exhibits his design for the façade of Milan Cathedral, which well maintains the character of the building, and also drawings of a bazaar at Moscow, and a church at Ashabad, each of which shows the natural style in different phases.

In the design for a church at Gatschina, by Professor Dr. Grimm and J. Stephanitz, and also in the second prize design for the Rathhaus, at Moscow, by V. Hogen and Karlamoff, we see examples of the modification of the Russian national style by the admixture of the Italian Renaissance feeling.

Spain is represented by two works only. They are by Cayetans Buigas Monrava, of Barcelona, a design to large scale, plans $\frac{1}{50}$, elevations and sections $\frac{1}{20}$, for a triumphal arch and museum to celebrate the fourth centenary of the discovery of America by Columbus. The other is a design for the Palace of Justice at Rome, by Angel & Battlevell, of Madrid, which follows the Belgian variety of Neo-Grec, exemplified by the Law Courts at Brussels.

From Switzerland come the works of one architect only, Chiodera V. Tschudy, of Zürich. These comprise designs in elaborate Baroco style, for a theatre and concert-hall at Zürich, and for a dining-room to a hotel at Rheinfael, also designs for synagogues at Zürich and St. Gallen, both Moresque in style, and a remarkable façade for a small country house at Bevers, in the Engadine, which, with plain rectangular window openings irregularly disposed, is painted all over with figures and architecture in perspective, the architecture of varied styles, the figures on different scales.

Save for the works of Professor Emerich Steindl, of Buda-pest, Hungary is meagrely represented. We cannot but ask why, if Steindl's work is here, that of Ybl should be absent.

Steindl's drawings are representative and varied: his design for the Parliament House at Buda-Pest; for the Rathhaus, in red and buff brick and stone, with some of the sgraffito so largely used in Buda-Pest; and the design for the Joseph-Polytechnic being representative of his public work; while the drawings for the restoration of the Castle Vajda Hunyad, shown in perspectives of the exterior and the interior courtyard, and the design for the Schloss Rakovszky are evidences of the architect's ability in domestic work. Steindl also exhibits examples of church restoration in the St. Ægidius church at Bartfeld, and at the cathedral of Kaschau, which latter appears an interesting example of ornate late Hungarian Gothic. The design for the Buda-Pest Opera-house, by Professor Steindl, is also hung, though the executed design by Ybl is absent.

The exhibition of Steindl's work would make a good model for an international exhibition of architecture. If the works of the chief architects of different countries were represented as that of Steindl is represented, we should have an architectural exhibition of the highest interest, and really international.

Messrs. Oedön, Lechner, and Gyula Pártos, also of Buda-Pest, are the only other representatives of Hungarian architecture, their most noticeable design being that for the Stadthaus at Szegedin, a Baroco design with mansard roof of green and yellow coloured tiles with copper on the flat pitch. Their other works are some shops and flats of not very remarkable character in the Andrassy-strasse of Buda-Pest.

This brings us to the end of the architectural exhibition. No English architectural work has been hung as yet.

The collection of paintings is of considerable interest. Perhaps the most striking part of the Exhibition is the Spanish contribution, which, while manifesting some French influence, is of a very high order. Powerful draughtsmanship and full, deep, rich colour are well displayed in some of the large historical pictures, which form so prominent a feature in the Spanish work, and examples of which may be mentioned in "The Battle of Trafalgar," by Justo Ruiz Luira, of Madrid, lent by the "National Gallery of Madrid;" "The Convention at Caspe," by Andres Parladé, of Seville; "A Council of War in Spain, 1810," by Domingo Muñoz y Cuesta, of Paris. Other examples of Spanish painting of high order are exhibited, such as the painting by L. Jiminez, "La Visite. Une Salle d'Hôpital," awarded a second medal at Paris.

Italy is, though well represented by works in a variety of style, from the rigid following of the old masters to the slap-dash work of some modern Italians, behind Spain in artistic power.

The work of Polish painters takes a high position; the drawing is spirited, the colour rich and full. The works of Anna Bilmska are among the Polish work, and include examples of water-colour, pastel, and oil.

A remarkable specimen of Polish art is "The Young Artist's Dream of the Future," by Jacek Malczewski, of Cracow; so also is the large historical picture by Jan Matejko, of Cracow, "Skarga's Sermon before the Landtag in the presence of King Sigismund II."

Hungary shows in the works of many of its painters the qualities prominent in Munkácsy, three of whose paintings are exhibited. The collection notably contains a large proportion of genre, which to the foreigner is interesting as giving glimpses of the life of the natives. A remarkable portrait is that of his father by Julius Basch, of Buda-Pest. Another excellent one is that of the Gräfin von der Gröben, by Leopold Horovitz.

England is well represented in the matter of oil-painting by a selection of good work, Alma Tadema, Aumonier, Boughton, John Collier, Walter Crane, Mrs. Crawfurd, Stanhope Forbes, Sir John Gilbert, Herkomer, Holl, Colin Hunter, Yeend King, Millais, Linton, Ouless, Henry Moore, Pettie, Poynter, Richmond, Watts, Wyllie, Sir Frederic Leighton, and others, fairly maintaining our credit.

The American works exhibited are representative of the ubiquity of Americans more than anything else, but European American art is well supported by the work amongst others of Fred. Arthur Bridgman, Lucy Lee Robbins, E. L. Weeks, and the Japanese sketches of H. Humphrey Moore.

Belgium is adequately represented and so are Holland, Denmark, and Norway.

The German work shows some instances of high artistic quality, but the varied influences which have been prominent in moulding the minds of German painters have been so varied and conflicting in different cases that it is difficult to give a brief epitome of the characteristics of modern German painting.

Sculpture, engraving, and water-colour are not strong in quality or in quantity; some individual examples are of high order, but it is evident that too little trouble has been taken with these departments as with the architectural portion of the exhibition.

Oil painters, it is clear, merely tolerate other artists, in Germany as in England, regarding them as an inferior order of workers only moderately endowed with artistic feeling and powers.

NOTES.

WE print in another column a letter from a well-known architect on the subject of "Progress in Restoration," especially in reference to the new north transept of Westminster Abbey. In a good deal of what our correspondent says we are disposed to agree. Mr. Pearson's north transept is on the whole a great success. It has more of the power of Mediæval work about it than most modern work, except the best of Street's. But part of what Mr. Cawston notices and praises in the new work is the success with which it has been made to look like old work in surface as well as in design, except the inevitable cleanness of the new stone, which cannot be got rid of. Now that is another matter altogether. If it be really true, as Mr. Cawston says, that Mr. Pearson insisted on having some left-handed men on the work in order to give variety of inclination to the tool marks, we can only say that we think that a very foolish business. Then again it is pointed out that details which would seem to be intended to be equally spaced are not equally spaced, by intention. We noticed this device at Truro Cathedral, where the corbel table in the interior of the tower is of stones of different thicknesses and somewhat unevenly spaced. This is worse still. No man who exercises common sense apart from archæological prejudice can for one moment believe that this kind of irregularity in Mediæval work was done on principle. It was the result of the rough and ready way of building of the time. There is no merit in it. A repeated detail is either intended to be rhythmically repeated or it is not. If it is not, scatter it about anywhere. If it is, space it correctly. To do otherwise is only a sign of bungling, not of artistic spirit. To do so deliberately in order to give a sham-Mediæval air to a building is one of the most foolish forms of archæological affectation.

IN the remarkable "Investigations on the Pediment Compositions of the Parthenon," just published in the Athenian *Mittheilungen* (xvi., 1, 1891), Dr. Bruno Sauer breaks new ground, not only as to results, but as to method. The paper is likely to make no little stir in the archæological world, and specially, as is natural, among Englishmen. The British Museum authorities, who have done so much for the interpretation of the Parthenon marbles, need not and will not begrudge to Dr. Sauer the privilege of his new method, for it is based on observations that could only be made at Athens; nay, more, by mounting to the height of the pediments and examining the actual framework still *in situ*. This, as regards the western pediment, is, by the Turkish staircase, still possible, though perilous, to the ordinary traveller; but the eastern pediment can only be reached by ladders and scaffolding. Dr. Sauer's first idea was to investigate the accessible western pediment, and use the results, so far as available for the reconstruction of the eastern. His discoveries, however, proved of such unexpected importance that the German archæological Institute placed at his disposal the necessary appliances for studying the eastern pediment *in situ*. The result is, briefly, this: the traces of the attachment of the various figures,—traces of the most varied kind,—far exceeded what had been supposed. That such traces existed from the early pediment has been well known since Mr. Penrose published his "Principles of Athenian Architecture" (see plate 18). But a comparison of his plate (the new edition is in this respect unaltered) with that of Dr. Sauer

(*Mittheilungen*, plate iii.) shows at once how much had remained unnoted. The details of Dr. Sauer's argument can, of course, only be followed by reference to his plate, where the trace of all the various indications, *e.g.*, crowbar marks, clamp marks, marks for the attachment of attributes, and a host of others are clearly and carefully drawn in. It must suffice here to take two salient examples of the gains of this very objective method, and its use as a corrective of *à priori* reasoning. It has been conjectured, and the conjecture had always struck us as a beautiful and ingenious one, that in the eastern pediment Selene was represented as riding a single horse, not driving a chariot. She frequently so appears in ancient art, and she will present thereby a more varied balance to the chariot-driving Helios in the opposite angle. Alas! the graceful fancy fades in the presence of the stern double fact that the attachment made for Selene is too far away from the horses' heads to admit of the riding position, and [an examination of the actual pediment (for which the author of the theory had always pleaded) shows the *remains of two horses' heads in situ*. A second instance tells against ourselves. We had always held that the centre of the east pediment was occupied by the seated figure of Zeus, and that the actual moment of the birth of Athene was represented. Again, alas! the attachment notes show there was no centre figure, but as in the west pediment two equally-balanced figures occupied the centre,—they can have been none other than Zeus and Athene,—it follows that Athene was represented already born full grown. These are but instances of the wide-reaching value of Dr. Sauer's method,—a method which, as he himself says, only opens the way for new interpretation, a subject to which we may have occasion to return.

HERR CHR. BAUMEISTER calls attention in the Berliner *Philologische Wochenschrift* (May 9) to a splendid series of original photographs of Greek sites, and specially those of recent excavations. The existence of the series seems little known in Germany, and certainly still less in England, where hackneyed and out-of-date views still continue to be reproduced in popular handbooks. The negatives were made by Freiherr von Stillfried, and the series of 120 form, in some respects, an admirable supplement to the well-known photographs of Baron Paul des Granges. The subjects are Mycenæ since the excavations, *e.g.*, the façade of the "tomb of Atreus," as it appears at present; the Liongate, since it was cleared out; and the circular enclosure within the gate. The plates devoted to Epidaurus contain the famous but inadequately published Corinthian capital, and several pieces of recently discovered sculpture. In the department of landscape we have the Langada pass, the Meteora monasteries of Thessaly, the harbour of Laurium, a panorama in three parts of Sparta, with a background of Tayegetos and the waterfall of Styx. Those who are acquainted with the rich series already in the possession of the Hellenic Society may be glad to supplement their knowledge from this collection.

THE Decimal Association met with very little encouragement from the Chancellor of the Exchequer at the interview which took place on the 8th inst. between Mr. Goschen and the representatives of the Association. Indeed, it may be said that he poured the iciest of cold water upon their scheme by declaring that it would be a task "which could be undertaken only when there was no other work to be done." This would relegate the reform to a most remote period, but it is undoubtedly one for which the country is far from ripe, and is but very slowly ripening. True, the Association disseminate literature demonstrating the undeniable advantages of the decimal system, the beauty and convenience of which is apparent enough to students, and to a considerable proportion of business men; but the bulk of the people,—who would be most directly affected,—are yet a long way from being reconciled to the thought of the changes which its adoption would involve. Education has, however, effected much in the past, and will doubtless eventually accomplish this most desirable reform. Mr. Goschen's remarks did not indicate any lack of sympathy, and were, after all, thoroughly practical, nor do we suppose that the Association will, in consequence, relax their efforts. They have to convince the community, to quote Mr. Goschen again, "to go through very great present inconvenience for the sake of ultimate advantage"—a necessarily slow process in a matter involving a complete revolution in transactions of such important and universal concern as buying and selling.

THE meeting of the Association of Master Builders on Monday last, to consider the question of the lock-out of the carpenters and joiners was an unusually large and influential one, and was practically unanimous. The resolution, which we have printed in another column, will by this time probably be posted up in every important builder's yard in the metropolis. The master builders have not in this case threatened the lock-out of any other trade than the carpenters and joiners, as it is from this trade only that the unreasonable demands have been made which they are determined to resist; but of course building work cannot be carried on for many weeks under these conditions without a practical stoppage of everything.

TWO engineers and one artist have written to the *Times* to complain of the proposed selection for the new gallery of English art of a site which had been recommended by a select committee in 1885, and by another committee in 1889 for a new building for the accommodation of the science collections at South Kensington. The contempt with which Sir F. Bramwell refers to the proposed alienation of this ground "for a picture-gallery" is characteristic enough; but there is reason in the objection, which Mr. Poynter also sustains, that the site proposed is in close topographical connexion with the College of Science, and that a piece of ground above the Technical Institute would be in immediate connexion with the Eastern Gallery, in which the Indian collection is now housed. Mr. Poynter goes on to ask why the existing galleries in Exhibition-road are not utilised for the picture gallery, remarking that they are the best lighted and best proportioned picture galleries in England. They are very good galleries for showing pictures, no doubt, in regard to lighting; but they were built rather as temporary galleries, and are not either in architectural appearance or in structure equal to what would be required for a permanent gallery of art. They could be rebuilt, no doubt, on the same section, and with better architectural façades and more monumental construction. The grievance of the men of science, however, in regard to the present proposal, is obviously not unreasonable.

ACCORDING to *L'Architecture*, the congress of French architects this year will be held at Paris from the 15th to the 20th of June. The following are the principa subjects to be discussed: "The formation of architectural museums;" "Architectural education in the Provinces;" "Instruction in the administration and accounts of architectural work;" and "The conservation of art-treasures on their original sites."

WE understand that the District Surveyors' Association have nominated their President, Mr. C. F. Hayward, for membership on the Council of the Royal Institute of British Architects, being desirous that the interests of District Surveyors should be more immediately represented on the Council than has hitherto been the case. While mentioning the Institute, we may add that at the recent annual meeting, the hon. sec. announced that the Council had made an alteration in the Soane Medallion competition, which until recently carried with it a sum of 50*l.*, conditional upon three months' travel abroad. Being the principal Institute prize, the Council have now decided to offer this time 100*l.*, and to make the period of foreign travel six, instead of three, months. The Council express the hope that students will show their appreciation of the change by competing worthily for the prize. This is an excellent move, and we hope its results will appear in the shape of a better contest for the Soane Medallion in future.

UNDER the heading "Is it Aristotle's Tomb?" Dr. Waldstein writes a short article in the *Nineteenth Century* giving a description of the circumstances of his finding the tomb at Eretria referred to, and discussing the probabilities for and against it being the actual grave of the great philosopher. He says:—

"I had been prepared to expect a person of distinction in this grave; but when I extracted from it one gold diadem (a band of pure gold about 1½ in. wide, with *repoussé* patterns on it: it was fastened round the brow), and then another, and still another, until six were drawn out, I felt confirmed in my anticipation. At the head, where a portion of the skull remained, the earth having dissolved many of the bones, there was another diadem with leaves of conventionalised ivy shape attached to it; then came a metal pen (the only specimen I have heard of as having been found in Greece) about 2 in. long, cut and slit like a quill pen; and then followed two styluses for writing on wax tablets, flattened at the end to enable the writer to erase a mistake, of the pattern already known. There were a number of terra-cotta statuettes in the grave; but one I found at the head struck me as being unique. It represented a type of statues of the fourth century B.C., known as that of a philosopher and orator. The hands of this draped figure were folded at the side. It was then that, for the first time, the thrilling possibility of the attribution of this grave to that of the great philosopher flashed through my mind, for Christodoros described the statue of Aristotle which he saw at Constantinople as standing with folded hands. But this possibility was not to be thought of, and still less mentioned, and it seemed hopeless to find any definite confirmation, inasmuch as the inscription designating the name of the family of the tomb must have been on the superstructure of the enclosure, which had gone. But the next day I excavated the grave beside this one, towards the centre of the enclosure, which, from its position and construction, is distinctly later, and at the foot of this grave, covered by a pilaster-like thick slab resting securely on this block, was a small marble slab which contained the inscription [Β]ΙΟΤΗ [Α]ΡΙΣΤΟΤΕΛΟΥ.

According to the best authorities on matters epigraphical, this clear-cut inscription is not later than the third century B.C. This inscription seemed to give one name of the member of the family here interred, and this name is that of Aristotle. According to the best authorities, the great philosopher retired from Athens, after the charge brought against him, to Chalkis in Eubœa, where he died, in the year 323 B.C., of disease of the stomach. There he had possessions, and there he left to his second wife, Herpyllis, 'his country-house in the garden.' All other accounts are considered apocryphal. Now Chalkis is the city immediately bordering upon Eretria, in the island of Eubœa, and the domains of these two cities adjoin one another."

Against these facts Dr. Waldstein says that it must be remembered that Chalkis is not Eretria, though immediately adjacent, that there were wars between the inhabitants of the two districts, and that the name Aristotle is not so uncommon, he having himself found eighteen inscriptions in which it occurs. On the other hand inscriptions relating to Chalkis have been found at Eretria; the grave is evidently that of an eminent man, and the grave of an eminent man is more likely to be found and recognised than that of an obscure person. Dr. Waldstein reserves his own judgment, merely giving the facts and the considerations on each side of the question.

THE London Playing Fields Committee has by its first report drawn public attention to its existence. Whilst such a body is to be welcomed, there may be some question whether the cause of open spaces and fresh

a'r is altogether benefited by the multiplication of these societies. On the other hand, if they work well together, it may be that they really are only on the same footing as committees of one large body, each looking after open spaces primarily to be used for different objects. Meanwhile, we commend to the attention of the above committee the question of securing the portion of Holland Park on which it is intended to erect houses, as a playing field, and also the advisability of securing as much land as possible near the northern extension of the Metropolitan Railway. This land is now very accessible, and affords perhaps the most favourable field near London for the operations of this committee.

THE Catholic chapel in Sutton-street, Soho-square,—commonly known as St. Patrick's, Soho,—has just been demolished. It is about to be rebuilt upon an enlarged area, for which the site of a house, No. 21A, on the eastern side of the square has been acquired. The new church will be erected by Mr. W. H. Gaze, contractor, after the designs of Messrs. Kelly & Birchall, architects. With the removal of that house and the chapel have disappeared, as we gather, the last remains of Carlisle House. There, with the Duchesses of Bolton and Kingston, and the Duke of Queensberry amongst her earliest patrons, Mrs. Teresa Cornelys used to give the concerts, ridottos, and masquerades, whose popularity ultimately waned before the superior and more decorous attractions of "Almack's" and the Pantheon. In "Records of My Life" (1832) by John Taylor, author of "Monsieur Tonson," will be found an account of a visit he paid to Mrs. Cornelys, at Knightsbridge, where he saw her in comparative indigence, selling asses' milk and keeping a breakfast-room for a living. She had been fined 50*l.* at Bow-street for allowing in her house "riotous assemblages of persons in masks"; in November, 1772, Mrs. Cornelys, of Carlisle House, St. Anne's, Soho, dealer, figures in the *Gazette*, and the Temple of Festivity is advertised for sale. About eight years later she finally yielded to adverse fortune, and in August, 1797, died in the Fleet. Carlisle House was built about two hundred years ago for either Charles Howard, first Earl of Carlisle, or his son and successor, Edward. In the parish rate-books for 1707, we have found that Earl Carlisle—Charles, the third Earl—is rated here at 5*l.*; the next house, being tenanted by "lady ffauconbridg," is assessed for 4*l.* 3s. This, then, must be Falconberg House, as occupied by Mary, Lady Falconberg, daughter of Oliver Cromwell, and wife of Thomas, Viscount Falconbridge. She died March 14, 1712, and was buried in Chiswick churchyard. The street, indeed, takes its name from Sutton Court, Chiswick, a country-house of the Falconbergs, and Falconberg-court yet remains. Falconberg House was latterly known as the White House, when it enjoyed a reputation very similar to that of the house of Mrs. Cornelys at the opposite corner of Sutton-street. With the exception of one or two rooms, the interior has since been practically rebuilt, and as No. 21, the house is now incorporated in Messrs. Crosse & Blackwell's premises in the square. The greater portion of Carlisle House was dismantled in or about 1804. But the music or ball room, connected with the house by the "Chinese Bridge," had already been secured and converted for purposes of the chapel of which we speak. A gateway, now destroyed, formed the entrance for the sedan-chairs, of which the bearers were often entreated, in Mrs. Cornelys' advertisements, to behave themselves in a more seemly manner. A similar gateway of Falconberg House, opening into the courtyard, has lately been pulled down.

THE *Courrier de l'Art*, which has reappeared, after a temporary cessation of publication since December owing to the serious illness of the editor (a reason which seems to be quite accepted in the easy-going ways of French journalism), publishes the following comment on the distinction between the treatment of Sunday in London and in the provinces in this country, which is not without its point:—

"*Mappin Art Gallery, à Sheffield.*

De ce que Londres est mortellement ennuyeux le dimanche, de ce que la poste n'y fonctionne pas, de ce que toute distraction intelligente y est proscrite, on n'a que trop souvent le tort de conclure qu'il en est ainsi dans toute l'Angleterre. C'est une vaste erreur. En province, la poste fonctionne dans la matinée du dimanche, et on n'y commet pas ce jour-là, comme à Londres, l'insigne sottise de refuser l'entrée des Musées au public. C'est ainsi, par exemple, qu'à Sheffield la population ouvrière est des plus assidues à fréquenter le Musée le dimanche. Du 1er au 9 janvier 1891, la moyenne des visiteurs quotidiens a été de 632, mais le dimanche 4 janvier, il n'y a pas eu moins de 1,475 personnes qui sont venues étudier les œuvres d'art."

THE second exhibition held by the Armourers and Braziers' Company at their hall in Coleman-street, is in most respects similar to that held last year, which was noticed and illustrated in our columns. There are a large number of copper and brass repoussé dishes by Mr. Pearson, in the style which is generally associated with his name, and various smaller articles such as sword-hilts, door-plates, and frames of various kinds. One of the most original and carefully-executed designs is that of an oval jardinière in copper and brass, with subjects, "Night and Morning" on four panels. This is by Mr. Samuel Cope. Several lamps, principally designed for the electric light, are suspended from the ceiling. That by Mr. Henry Ross is treated in bronze, another by Messrs. Strode & Co. in brass, and a third by Mr. C. R. Ashbee in copper and pewter. The Lyzwick Hall Art School, Keswick, amongst other objects sends a beaker, repoussé work in copper, which combines simplicity of form with richness of decoration, and the lip is apparently a good one for use. The rooms devoted to designs and models show an advance on last year. A design for coat-of-armour for a Gesso model executed by Mr. G. F. Watts as a study for his picture "The Court of Death," and a portion of a frieze illustrating the "Expulsion of Evil" designed by Miss Mary S. Newill, are two amongst a large number of interesting designs. A fourth room contains a loan exhibition of arms and armour and various objects in metal.

ARCHITECTURE AT THE ROYAL ACADEMY.—III.

1,746. "Proposed Church of St. Mark Salisbury;" Mr. J. A. Reeve. A perspective drawing of a solid-looking Late Gothic church, hung too high to see detail; the west tower with its lantern termination has a rich effect, but the pinnacles seem rather too heavy for the scale of the tower.

1,747. "Scuola Hanbury at Latte, Ventimiglia, Italy;" Mr. W. D. Caröe. Interesting as a treatment of a modern Italian building by an English architect, in somewhat of native manner. The front shows an open round-arched loggia on the ground story; a square campanile with a low-pitched hip-roof rises from the centre of the front, strengthened with a buttress in the middle of each face; the whole building is roofed with a spreading low-pitched hip-roof of the general proportion and design which is native to the country. A small plan is appended. The drawing, as a drawing, is rather injured by lining-in too much for shadows, a common mistake in recent pen drawings; it spoils the brightness of a drawing and obscures detail.

1,748. "St. Matthew's Parish Rooms, Clapton;" Mr. Arnold Mitchell. This is a companion to No. 1,737, of both of which we publish reproductions this week; this one appears to be an executed design, the other being only a competition drawing. Both are charming specimens of the artist's manner of working in brown tint, the effect of which we have endeavoured to reproduce to some extent in the illustrations; he knows how to arrange his lights and shadows for the best effect, though it must be admitted that the manner of finishing the drawings conveys a great deal of the effect of old work, and the building would probably hardly appear so picturesque in execution as in the drawing. The design however is simple and suitable for its purpose.

1,749. "St. Cuthbert's College, Worksop; South Front;" Messrs. Carpenter and Ingelow. A coloured elevation of a Late Gothic collegiate building, red brick and stone dressings, with stepped gables at the centre and wings, and square-headed mullioned windows; the whole treated in a simple, unaffected manner. The centre doorway shows a little decorative treatment, and a statue rises over it. A little defect which strikes the eye at once in an otherwise pleasing elevation is that the square dormers at the top have the sills of the windows exactly on a level with the coping of the wall between them, so that they seem built on to and unconnected with the substructure; the windows should have been brought a little lower or the coping carried a little higher.

1,750. "The New Town Hall, Cleckheaton;" Messrs. Mawson and Hudson. A small pencil sketch, very nicely touched in, though slight, of a picturesque front in the modern manner which is based on Elizabethan. A little sketch-plan is appended. The drawing is so modest and reticent in style that it escaped our notice in our previous notes on the examples of municipal architecture in the room.

1,751. "House at Melbourne; Garden Front;" Mr. R. Mortimer. A slightly hard and mechanical pen drawing, but there is picturesque effect in the design, especially in the bold treatment of the two large semi-circular arches, rising from the plinth-line as an impost, which form openings to two verandahs; these give a distinct character to the design.

1,752. "Welsh Church, Briton Ferry;" Messrs. Seddon and Carter. A small sketch of a Gothic church simple to the degree of naïveté, but not the less suitable to a country situation. It has a low battlemented south-west tower with a small scaled tower; a little expression is given to the church by the grouping of the windows.

1,754. "A Bungalow;" by Mr. R. A. Briggs. This is published in the present number, along with another drawing of the same class by the same hand. It is not very often that we see anything so solid as a Doric order brought in as a verandah, but it looks well, and certainly is a welcome change from the ordinary cast-iron standards with ornamental capitals, and gives an architectural character to a simple and unpretending house.

1,757. "St. Barnabas Cottage Hospital, Saltash, Cornwall;" Mr. G. H. Fellowes Prynne. This is a very well-executed tinted drawing of a rather picturesquely varied group of building, but a little too important to answer to the idea of a "cottage" hospital, and as there is no plan, it is impossible to say out of what features arise the suggestion for this rather heaped-up conglomerate of building. Is the apse in the rear that of a chapel? or if not, what is its connexion with the plan of a cottage hospital?

1,758. "Schools at Knowle, Bristol;" the late John D. Sedding. This is an admirable water-colour showing an interior court of those charmingly picturesque schools, a drawing of which was exhibited in last year's Academy, and illustrated in the *Builder* for June 14, 1890. It shows again Mr. Sedding's keen eye for the picturesque of mere building, independent of any ornament. The manner in which the square stone bays are carried up, like pillars of masonry, to stop against the underside of the wide projecting eaves, and connected below by the arched recesses with bits of lean-to roof, is a delightful example of the production of picturesque effect from the mere arrangement of the necessary constructive portions of a building. Perhaps "it were to consider too curiously," as Horatio says, to ask what or whether any interior use is made of the spaces under those bits of lean-to roof; but anyhow the whole is a charming picture, and if it were an old building it would be in fifty sketch-books.

1,760. "A Country Parsonage;" Mr. F. H. Tulloch. A pretty pen drawing of a house with large gables filled with vertical half-timber work, resting on a different treatment in the ground story, and with a rather large mountain of roof rising in the middle above the two gables. We do not know that we should take it to be a parsonage if we stumbled upon it in a country parish: as a general rule country parsonages are rather more sober in their lines.

1,761. "Borwick Hall, Lancashire;" Mr. E.

Hartley. A nice pen sketch of a delightful old Late Gothic house. We published a reproduction of the drawing in the *Builder* of October 18, 1890.

1,762. "Oswestry Municipal Buildings;" Mr. T. E. Pryce. The modern Pilaster-and-Mullion style (we must invent a name for it); a pleasing front, but containing no features to differentiate it from many other modern buildings in the same manner. The windows in the side portion of the façade appear to want something between them and the eaves, against which they are pushed up in a rather crude fashion.

1,763. "St. Wulfran, Abbeville, West Front, North Doorway;" H. Wilson. A slight but freely-treated water-colour sketch, but which, in comparison with some others of the same artist's water-colour drawings, seems a little cold and deficient in colour.

1,764. "Church of St. Mary Chepstow; restoration;" Messrs. Seddon and Carter. If, as would unquestionably be the case in a French exhibition, a drawing were given showing the present state of the church, we could then form a judgment as to the restoration. According to the wretched system pursued in England, all we can see is a drawing of a church, of which we know not what is new or what is old, or what the whole thing means. We do not charge this defect necessarily on the architects. The probability is that if they had sent a drawing showing the actual state, the Academy would not have hung it.

1,765. "Chapel in the East of London arranged to be used also as a Hall and Schoolroom;" F. W. Troup. Two geometrical elevations, and a small plan and section, of what seems to be a simple building suited to its purpose, but it is hung too high to be seen.

1,766. "Wall Decoration;" Mr. Sydney Vacher. A rich and effective "pattern," suitable for a wall-paper, and very harmonious in colour; the main features of it are decorative blossoms of a crimson tone, treated flatly, and encircled by leafage of a warm but delicate yellowish tone. The details are all exceedingly good; the defect of the design is a want of continued growth, the repetition parts seem rather spaced side by side than leading naturally into one another.

1,768. "Two Interiors of Halls in Two Bungalow Houses;" Mr. R. A. Briggs. Rather lofty halls for the type of house called "bungalow." One of them has an open timber roof with a large open fireplace with armour over it; the other is a galleried hall with a flat ceiling with heavy pendants on it, we fear of plaster.

1,769 "St. Lucy's Home, Gloucester," and 1,770 "Almshouses, Beckenham Kent;" two small water-colour drawings of buildings by the late J. D. Sedding. The first is a simple cottage, with a wide window at each side of the centre doorway, which is recessed so as to form a little porch; the other is a rather larger and more irregular building of brick with tiled roof, with half-timbered gable introduced. The first-named building (of which a small plan is given), though so small and simple, is treated in detail in a manner that at once shows the hand of the architect.

1,771. "Entrance Gates, the Villa Aurelia, Rome;" Mr. Thos. H. Watson. We presume these are modern gates, although they date from Rome. They form a graceful piece of rather elaborate wrought-iron work, the detail rather open at the bottom, and crowded in order to get a rich effect above. A wreath and two cupids at the centre and sides of the top are apparently intended to be gilt; in the centre of the scroll work is a shield and crest. The defect of the design is that, with a good deal of pretty detail, it is rather too "busy," wants coherence, and some parts of it are deficient in purity of line; for instance, the crooked line of the band at the lower part of the gate head, which catches the eye disagreeably with its accidental-looking bends.

PROPOSED PUBLIC PARK OR GARDEN FOR HANLEY.—The *Staffordshire Sentinel* publishes the details of a proposal for the creation of what may be called an in-town park or garden for the East Ward of Hanley. Messrs. Sugden, of Leek, in conjunction with Mr. Jackman, landscape gardener, have prepared a plan for dealing with the site, space being reserved for a bowling-green, a quoit-ground, and a tennis-lawn. Separate playgrounds will also be provided for boys and girls. The area of the proposed park is ten acres, and the cost of acquiring it is put at 4,500*l.* The cost of laying out the ground is estimated at 2,500*l.*, and this sum it is proposed to raise by voluntary subscription.

THE NAVAL EXHIBITION.

LIKE the Military Exhibition, the Naval Exhibition in the same grounds has a good deal of the bazaar about it. Show-cases of manufactures of various kinds, which are only in the most remote degree connected with the ostensible object of the Exhibition, seem the necessary and inevitable way of filling up the middle portion of the floor in the covered galleries, and are in fact nothing more than a series of advertisements. These of course we may pass over, rather regretting their presence as jarring with what should be the prominent object of such an Exhibition, viz.: the history of naval architecture and naval warfare. These subjects, however, are very fairly represented in the Exhibition, in spite of the admixture of a good deal of claptrap or of mere shop considerations.

The irregular quadrangle of galleries which makes the chief portion of the indoor show is divided into the Franklin Gallery, the Nelson Gallery, the Howe Gallery, the Cook Gallery, the Armstrong Gallery, and the Seppings Gallery. The origin of all the names but the last is obvious; it may be necessary to mention that Sir Robert Seppings, an eminent naval architect, was Surveyor of the Navy in the reign of George IV. The end of the Seppings Gallery brings us round again to the entrance.

The Arctic sub-division naturally finds place in the Franklin Gallery, and includes a number of Arctic relics, and examples or models (full size) of sleighs and boats used in Arctic exploration. From this we pass into the Nelson Gallery, which is the Art Gallery of the Exhibition, along with the Blake and Benbow Galleries, which are parallel with it, but appear to be not complete in their arrangements; at all events they were barred to the public up to the middle of this week. The Nelson Gallery is in one sense rather a melancholy spectacle. It is exhilarating no doubt, to find records of such a host of deeds of naval daring crowned with triumphant success, but one cannot help wishing they had not given rise to so many ludicrously bad paintings. Improbable ships, in too many of these works, sail upon impossible water; in fact the general impression conveyed is that the sea painters of the end of the last and the earlier part of the present century never took the trouble to look at the sea to ascertain what it was like, but gave it the colour and the drawing which happened to suit their composition. There is one big Turner here, the property of the Admiralty, of the battle of Trafalgar, in which a great grandeur is given to the *Victory*, with her pomp of canvas, the ship appearing in fact to be supernaturally enlarged for the purpose of Turner's effect; but the water is very little better than that of many of the paintings by inferior and unknown hands. The Admiralty also lend De Loutherbourg's large painting of the 1st of June fight, in which the water is even more curious than Turner's; it answers the purpose of the painter's theatrical colour scheme, but it really looks more like treacle than water. There is a small picture of the battle of Trafalgar in the present Royal Academy Exhibition, by Mr. Wyllie, which, as a pictorial representation, it may be fairly said is worth all the contents of the "Nelson Gallery" at Chelsea put together; there we see real sea-water, bright in the sun, with its long even heave on which the ships roll slowly, not jumping up into a heap, regardless of the action of wind or the laws of gravitation, whenever the painter wants it for his "composition." However, peace be with the old naval painters; they meant well, and they certainly had plenty to show of interest in their subjects, if the treatment of them was rather mannered and theatrical. That a painting should intend to do honour to Nelson is perhaps a sufficient ground for treating it with respect. Among the best of the old pictures is one of that remarkable exploit of Nelson's at the battle of St. Vincent, when, having boarded and captured one line-of-battle ship of the enemy's, and finding her foul of another, he led the way into the second ship and captured that also. But it is very slow of the compilers of the catalogue not to have quoted the *mot* of the sailors on the occasion, who spoke of the exploit as an example of "Nelson's patent bridge for boarding first-rates." The British tar of those days was given to saying spirited things, but he seldom said anything more spirited than that. The painting of "Cornwallis's Retreat" of June 17, 1795, by Elliot, when Cornwallis made good his retreat from a much larger French force by the most masterly manœuvring, is interesting as giving us the effect of the old sailing-ships in line, an effect finer, in a picturesque sense, than anything the modern navy can show. Among the figure-subjects, scenes on the decks of the ships, West's old painting of the "Death of Nelson," lent by the Corporation of Liverpool, comes out very well, and in general effect is perhaps superior to Maclise's more brilliant performance hung underneath it, in which there is admirable character in many of the figures, but the whole seems too impossibly and theatrically crowded. Mr. Wyllie's picture of "The Mighty Fallen," the breaking-up of an old line-of-battle ship, is a pathetic picture, and the late Mr. E. W. Cooke's large painting of "H.M.S. *Devastation*" is powerful in its way, though a little amusing from the obvious determination on the part of the artist to overawe us with a terrible and thunderous effect.

In the Cook Gallery are collected a large number of exhibits of work appertaining to various departments of navigation; signals, buoys and beacons, marine meteorology, hydrography, and instruments used in navigation. Among these are many models of lighthouses, besides the full-size model of the new Eddystone which is erected in the grounds, to the details of the construction of which we will make further reference next week. An interesting collection of sounding-machines of various dates is also to be found here; and the Models Section contains a collection of models of apparatus for lowering boats with speed and safety; that operation for which so many means have been devised, none of which seems to have recommended itself finally and undeniably as the best for lowering boats in a heavy sea.

In the Seppings Gallery are a collection of marine engines or models of engines, and a very large and beautiful collection of models of ships of various dates. This is one of the most interesting portions of the Exhibition, and will in itself well repay a visit. It includes a historical series of war-ships of various dates in this century, chiefly during the last forty years or so, giving a graphical exemplification of the progress of ship-building in the navy. One or two very fine full-rigged models of the sailing men-of-war of the old school are not the least interesting of this class of exhibits, and make one almost inclined to sigh over the progress of modern science which has relegated these splendid objects, with their grand spread of sail and yard, and their forest of tackle, to the position of mere models for museums.

In the St. Vincent Gallery, running along the north side of the grounds, are the ordnance exhibits. We commence with models or examples of old ordnance, proceeding onwards to models or specimens of modern projectiles, heavy guns, and the class of quick-firing guns, Hotchkiss, Maxim, and others. The Armstrong Gallery succeeds to this, the ground-floor of which is laid out as a half-plan of the deck and battery of a modern ironclad, with a completely-furnished "gun-room" and lieutenant's cabin. On the upper floor are arranged a large series of models, including the large model of H.M.S. *Victoria*, with her torpedo-nettings out, and every visible detail finished most beautifully. This model claims to be "probably the largest and most beautiful ever constructed," it would certainly seem difficult to surpass it. The large "Camperdown Gallery," along the east side of the grounds, contains an extensive torpedo exhibition, with Whitehead torpedoes entire and in sections, and models of torpedo mines. A large collection of materials used in ship and engine construction are also arranged in this gallery. There are some splendid examples of large castings, especially a three-throw crank-axle of "Whitworth fluid compressed steel," for H.M.S. *Jumna*. A model of Whitworth's measuring-machine, for measuring to the $\frac{1}{100000}$ of an inch, is exhibited. The measurement is made between two small discs which form the extremities of two castings mounted so as to slide to and from each other on a horizontal bed. A screw axle traverses them, and a direct turn with a wheel at one end of the screw puts the two points approximately in the required position. The minute measurements are read off from the rim of a much larger wheel which communicates a much smaller movement to one of the measuring-points, the rim of the wheel being divided into a scale of 500 parts, and working against a vernier.

Between the St. Vincent and Camperdown Galleries is the Armstrong Gallery, where are to be seen some large guns, and a model of a 110-ton gun, accompanied by a full-size diagram on the wall of the target penetrated by the shot in a recent experiment, the path of the projectile being indicated on the drawing. A more awe-inspiring example of the penetrating power of modern artillery it would be difficult to imagine. The structure of the target is as follows:—Commencing from the outside face, opposed to the shot, we have 20 in. of compound metal backed by 8 in. of iron; next, 20 ft. of square oak beams built up in courses across the direction of the shot; then 5 ft. of granite blocks; 11 ft. of concrete; and finally 6 ft. of brickwork. The projectile went in a straight line through the whole of this material up to the middle of the brickwork, in which it stopped about half-way, or only 3 ft. short of the full section of this tremendous target.

Among the mere shows of the Exhibition there are two that are well worth seeing. One of these is the model of the *Victory*. This is only a model in a sense that it is not a real ship but a built-up imitation of one. It is the actual size of the original, and is made up with a realism which is extraordinary. The main gun-deck, on to which the visitor comes on entering, is completely fitted up as if for action, all the guns and gear in their places, and between the appearance of things and the congenial smell of tar it is easy to believe for the moment that one is on board of the old ship. In the fore-part of the deck is to be seen one of the vast hemp cables which were in use before the days of chain cables. Below is the cockpit, not tall enough to stand upright in, and one can fancy what an *inferno* it must have been in time of action. Here there is a group of modelled figures of the dying Nelson and his attendants,—the only incident we regret in the model; it gives a Tussaud air to what is otherwise an interesting and splendidly-executed piece of work. The other show to which we refer is the panorama of the battle of Trafalgar. The visitor is supposed to be on the quarter-deck of the *Victory*, with the ship's length extended in front of him, beyond is the sea and the ships engaged in the action. The thing is very well done, and the illusion for the moment very complete, as far as the eye is concerned; "the thunder of the captains, and the shouting," certainly, we cannot have in a panorama.

It is hardly within our province to do more than give a general sketch of the contents of an Exhibition of this class, though there are one or two special departments of it to which we may give some more detailed consideration on another occasion. The first approach from the usual entrance is not fortunate in its effect, and gives, as we have observed, rather a bazaar-like impression; but there will be found to be plenty of solid practical interest in other departments of the collection.

STAINED GLASS.*

YOU must know what glass is before you can judge of it, and you should be able to judge of it (if you have anything to do with it), in order to be able to distinguish good from bad, and so be able to promote the one and discountenance the other.

What, then, is stained glass?

Well, let me first tell you that it is by no means only that which is often called painted glass. To have a figure in a window it must of course be painted, but the staining of a window is its colour, the painting of a window is merely the drawing and shading of the figures and forms in it with brown paint. With regard to colour, there is only one right way to attain it, but there are several wrong ways, which, though really very contemptible, are worth a word of warning, for, unfortunately, they are only too common:—I allude to certain cheap and very nasty things which pretend to be "substitutes for stained glass." They all attain their end by a film of colour on the surface; you will have a very good illustration of the difference between them and stained glass if you take two wine-glasses, put them between you and the light, paint the inside of the one with the purest water-colour you can get—say rose madder—and fill the inside of the other with fine old port. Real stained glass, then, like the glass of port wine, is stained through and through, its colour is a part of its existence, and has been conveyed to its whole mass by chemical processes while in a state of fusion in the course of its actual manufacture. Here are some pieces of the lightest tinted kinds of stained glass, "whites" as they are called, and you will see that they appear but little removed from white; but to show you how completely imbued they are with such colour as they have I need only show you them against the light, edgewise, when one appears deep sea-green, another blue, and a third orange. That, then, is stained glass, a very noble material, worthy of much respect.

Now, of course, a mass of liquid substance in a vessel will be of one colour throughout, so that you will easily understand that a sheet of glass, blown as it must be direct from the melting-pot, will, as a rule, have but one colour, with slight accidental varieties of tone, arising from the colouring matter having been unequally distributed. It therefore follows that in a window where various colours are desired, each separate tint must be cut from a separate sheet, and they must be joined into a patchwork or mosaic by some mechanical means; there is but one,—lead. They are joined together, then, by a strip of lead, grooved on each side, to receive the

edge of the glass. But we have got on here too fast; this is the last process by which the window is finished; let us go back to the beginning and consider it step by step.

A window is wanted, let us suppose, richly coloured and containing a sacred subject. In the first place, a full-sized cartoon is made representing the window exactly as it is to be, lead-lines and all, and a separate small sketch is made giving the colour. This work always should be, and not always is, done by an artist who knows intimately all the processes and capabilities of the material, and who has worked on the glass itself in all its stages. It is not enough that he should be able to design poetically and execute work nobly in some other material. Oil-painting, for example, is incomparably more difficult than glass-painting, and yet there are not half-a-dozen members even of the Royal Academy who are much more fitted to make the working drawings for a window than they are to make those for, say, a steam-engine; they are *somewhat* more fitted, no doubt, for their knowledge of the figure is germane to the one purpose and not to the other, but that is all; technical training in the material itself is essential to working in it successfully and intelligently; on the other hand, unfortunately, those trained only in the shops receive a very poor artistic education; they work long hours in the glass factory, and pick up their knowledge of drawing in some Government night-school, under gas-light, when they ought by rights to be resting.

A separate cartoon, on tracing cloth, of the lead-lines only is the next step. It is traced from the original in order to guide the cutter, who, from it, cuts out in cartridge-paper the accurate shape of each piece of glass; this bit of paper he uses as a gauge; he lays it on the sheet of glass and draws round it with his diamond, one side at a time, breaking the glass away as he goes with his fingers, or, if the pieces are small, with pliers. The glass being all cut, the pieces are taken to the painting-room, where the painters first trace with the metallic enamel all the outline the artist has provided, or put some in out of their own moral consciousness, if they think the artist has provided too little. The foreman painter generally does the flesh, and his subordinates the draperies, &c., the only person who rarely has a finger in the pie being the artist who designed the whole. I remember once, in an establishment where some work of mine was being painted, taking up a brush to alter the expression of a head which had rather missed my intention; but I was very soon taught my place, for the painter who had done it came up in much disturbance, and told me that he never allowed any one to touch "his work." His contention was intelligible enough,—he was responsible only to the head of the firm, and a designer for stained glass who had ever touched glass was something new to him. I had, however, to get these relationships amicably readjusted, and I wish they were so generally.

The expression of a head, for example, depends more upon these black touches than upon anything else, and if there is one part of stained-glass work more than another which the artist himself always ought to do, and never does, it is the outline. However, the outlined bits are next put into the kiln and subjected to great heat, which fuses the outline indelibly into them; they are then taken out and waxed down in their proper places upon a sheet of plate glass, so that the whole can be raised upright on an easel against the light of the sky, in which situation it is to be painted. Not to weary you with technical details, the shading of the figures, &c., is then copied by the painters from the cartoon, by a series of processes known to them; some work in one way, some in another, but, as a rule, chiefly by *removing* what is necessary out of an even tint or "mat" first laid over the whole glass, much after the method of mezzotint in engraving,—this work is done with various kinds of rough hog-hair or wire brushes called "scrubs," the finger also being often used as well as a style or needle, the material originally laid on being a brown enamel powder, much the colour of snuff, ground up with water and a little gum or sugar. A great amount of finish can be got in this material, and a very realistic picture produced. When finished, the pieces are again put into the kiln to fix the shading, as the outline was previously fixed, and they generally then pass through a second painting and a second fire. But we have not done, even then; they are taken out again for a final process, which is of great importance. I said that the colour of stained glass was conveyed to the whole mass of it while liquid, and not laid on the surface, but there is one splendid exception—a pure and brilliant yellow, made from silver and known as silver stain. It is applied to the reverse side of the glass (the one that will be the outside when the window is put up), and then the pieces so treated are again fired, rendering the yellow perfectly permanent, as specimens centuries old attest. If there is a danger in its use, it is that of our being tempted to use it to excess, for it is very fascinating; by it a crude, primary blue can be shaded off into green, a red can be brought from crimson, through scarlet to orange, and almost to yellow itself; and, used on the whiter glasses, it can, without any additional lead-line, turn the hair of some youthful figure into silky gold, throw a nimbus of amber light round the head of a saint, or be drawn as a golden diaper pattern over some rich robe. This is the final process: the pieces are leaded into their places by the guidance of the same cut-line by which they were cut, the joints are soldered together, and the interstices between glass and lead filled with cement, and the window is finished.

Now, I have said one thing upon which I wish to make a very grave criticism; the sentence is this: "A great amount of finish can be got in this material, and a very realistic picture produced." But, I ask, is this desirable? I think not, seeing that the said "material" is that brown enamel powder which I have compared with snuff, and it seems to me that the realistic treatment of the glass in such a material could only be defended if it could be shown that there is no other decorative art more capable of pourtraying for us the full beauty of the human form and the other elements of a great pictorial conception; but this is not the case: oil-painting and fresco can do the thing quite as delicately, quite as realistically, and much more truly, since they both have it in them to show that the shadows on flesh are *not* snuff-colour, and that human beings do not, as the world is constituted, walk about surrounded by a pitch-black outline ¼ in. wide. Stained glass is bound by these two stringent limitations, and those who attempt realism in it are driven to the expedient of covering up *all* the glass with enamel, and blurring and disguising the lead-line, and running it down the shadows of the drapery to hide it. You see they are obliged to cover up all the glass with *some* depth of tint, or the pieces left of clear glass would sparkle, so that the flesh would no longer look soft and smooth, the eye no longer liquid. But which is more important, that the flesh should look soft and smooth, &c., or that the window *should* sparkle? Of course, it *ought* to sparkle! it' the very thing that a window can do and that nothing else can do so well, and to disguise this quality for the sake of anything else is to seek an undesirable end; it is a most unworthy slight upon a noble material, distrusting its own lovely qualities of colour and translucency to force it, at their cost, to an end for which it is not fitted; nay, for which it is in a very

* A paper read before the Liverpool Art Club, on February 2, by Mr. C. W. Whall.

mischievous way *un*fitted. I said that those who treat glass in this way can get realism, though of a vulgar kind and at great sacrifice. But in aiming at realism there is one thing that they do get with a vengeance, and that is emphasis; for you will easily understand that the light through the glass will be the strongest light in a church, and the black of the lead-line against it will be about the strongest dark; they can produce any tone between the two with enamel; and, having thus the whole gamut at their disposal, they can, if they choose to use it, so emphasise, say, the Twelve Apostles, make them so pugnaciously emphatic, that no other form of decoration is left with a leg to stand on.

This facility for realism is full of danger, and, as a fact, has some very deplorable results. One is that the patron is satisfied with it,—looks upon glass as the proper medium for great pictorial compositions; the consequence being that if he wants such in his church his thoughts instantly turn to a window,—always a window, — and not half often enough to a fresco, an altar-piece, a reredos, or a piece of beautiful sculpture. He will have a fine east window,—by an artist, if he can get it,—and stick under it a cheap altar by some manufacturing firm who care not two straws for art. Just think for a moment how this reverses the right order of things. What is the use of a window? To see through, or,—and particularly in the case of a church,—to see by. To see what by? Why, the very thing that you would thus cause to take the second place to it, the ministry of the pulpit, or the mystery and sacrament of the altar and the font. When, therefore, you go to a church, and see "window" instead of seeing "church," be assured that, whatever may be the defects of the church, the windows are all wrong.

Another unfortunate result of this custom of making windows into realistic pictures is the effect it too often has, in my poor opinion, upon the artist. He finds that the glass will do all he wants to emphasise his heroic figure compositions, and he proceeds to design such with the full unrestricted liberty of the pictorial artist. He gradually thinks more of his figures and less of ornament; designs his groups without regard to the architecture of the church; throws away all the lovely opportunities which plan affords for re-echoing the character of the carved ornament of the church in another material, striking, as it were, a graceful and delicate variation on the original melody in another key, until at last he makes an entire composition, as if mullions and tracery bars did not exist; his angels plunge about from one lancet to the other, and the whole thing looks like a sort of sacred "transformation scene" in the air outside the window, — "a splash through a tracery," as an architect friend of mine once called a window otherwise beautiful enough.

But are not the windows, then, of King's College Chapel, Cambridge, for example, beautiful? And are not the later ones so unrestrained in their full development of pictorial composition as to lead us to feel that the artist might well have worked even under the influence of Raphael himself? Yes, when you have deciphered the composition you find it so; in itself it pays no respect to the architecture, but all that you see without this deciphering is a hap-hazard mosaic of colour. You don't see big, outlined masses asserting themselves with pictorial distinctness; the composition is there, but so disguised are even the main lines of it that they have to be, as I said, deciphered, and I question whether there's an undergraduate in the college, perhaps hardly a graduate, who knows so much as what the subjects are of all the windows.

Well, but you will say, "Surely this is unreasonable. Can there be any merit in telling a story and deliberately making it barely intelligible?" Well, admitting that I like the older Dureresque window the best, my answer still is, "Yes,—to achieve a greater good." "What good in this particular instance?" Superb beauty of colour, and most noble and modest subservience to the architecture; the whole result being so solemn, and, if I may use the word, so holy, that the mystery in it is almost felt to be like the mystery of the scriptures themselves, to be reverenced, studied, and only gradually understood; and in the meantime it has the same effect as that mystery has upon the mind; instead of getting weary of the windows from familiarity, one might worship under their "dim, religious light" every day of a long life, and know that one could hardly even then have penetrated to the depth of all their lovely harmonies. The truth is, that whether a window is arranged severely in harmony with the lines of the architecture, or whether the composition is as free as that of Raphael, there should always be mystery, and depth of mystery; it should not, the moment you enter the church, shout out all it has to say to you with the explicitness of a pictorial advertisement.

I have thus endeavoured to show you how stained-glass is produced. I have now, though it is not a task I like, to tell you something of the conditions under which it at present is produced. The first, and dominating one, is that of competition,—alas! mainly commercial, not artistic, competition. The Gothic revival of fifty years ago was started by religion and enthusiasm, and carried on by genius. But there was "a little rift within the lute" which has made the music pass into discordance,—a flaw in the panoply through which has been dealt the mortal wound. The reformers founded their action only on the past and its traditions,—what had been should again be, and all would be well. Commercialism saw the open gate, and welled in like the flowing of the tide.

The consequence is that now, not stained-glass only, but all forms of decoration are very largely produced upon commercial principles only; not without skill, indeed, of a kind, because there must be something to show for the money; but without originality, without imagination, without freshness and enthusiasm, and, most of all, without the most essential of all,—self-sacrifice, without which no true work of art was ever produced, or ever will be or can be, and with this kind of "Art" cut down to the lowest possible margin of profit by competing firms. The true artist, with all those qualities burning in his soul that the other lacks, must enter into the lists and find, if he can, a profit margin *within* the business one to cover the devotion which he lavishes on his work for the sake of love and duty. We do not hear of this. An artist makes light of these things; it is his business to accept self-sacrifice and his privilege; he is satisfied to do so without talking about it. But since I have been asked to speak to you about one branch of Art, it is a part of my duty to tell you how it is produced, and what it is quite likely you may buy when you buy a stained-glass window or a piece of decorative art of any kind.

First, unless you have given a very unusual subject, it is much more than probable that the figures will have been used perhaps a dozen, perhaps a score or thirty times, and very possibly copied from an old missal to begin with. Second, that all the ornament will have been borrowed from old sources, and the whole treatment founded on old methods and old modes.

Are we not beginning to be sick of this? Do we not begin to be weary of these sermons of the thirteenth and fourteenth century, edited for us by a brisk nineteenth century publisher, who does not believe a word of them? And even if they were the originals themselves, preached by the original preachers, you would let them remain where they are with reverence in the old church, but if you were starting afresh with a new one, would you be content to sit down with the admission that, while science has advanced, your religious and artistic sentiment has been stereotyped, and that for the needs of your own age they have nothing to say for themselves, except to repeat what they said in the days when men were searching for the elixir of life and the philosopher's stone, and the world was currently believed to be flat, and the centre of the universe?

Do I despise the past, then? Not so! and if one could hear its true voice, one were wise to listen. But do you imagine you will catch the spirit of those old artists by copying their method? They had but one method, and that you never copy,—to speak straight to the heart of their own day and to its needs, in language natural to it.

I have said that a figure would be repeated twenty or thirty times. I am not speaking rashly; I know definite instances of repetition to at least that extent. I will now tell you why.

Sad though it is, it is only by this practice that a living can be made out of stained glass at all. The practice is universal, and trade firms, competing with one another, have based their scale of charges upon it. It is understood that a profit-margin only exists by using the cartoons again and again. In a paper read at the late Art Congress at Birmingham, Mr. Blomfield, the architect, complained of the commercially-minded architect, with his "stock mouldings and stock sections and details;" but what do you think of the commercially-minded painter or sculptor, with his "stock" Apostles and Prophets, stock Faiths, Hopes, and Charities, stock Last Suppers and stock Last Judgments? We have often heard with a thrill the august mysterious names of the princes of the Angelic Hierarchy, but what do you think of the new member of the heavenly choirs, to whom I was introduced the other day, bearing the portentous title "Angel No. 16"? What chance would my poor "St. Michael" here have against *him*,—in commercial circles? And now, in order to show you what sort of thought goes to the making of a work of art when an artist who works for love sets himself to deal with it, I, who certainly work for love, however feebly, will briefly presume to describe to you the imaginative intention of a window of my own which I have brought here for you to look at. I must be so egotistical, because, though (in spite of the untoward conditions I have described) I know two or three men whose work I should prefer to show you as models of what should be, I should not dare to think I had sounded the depth of their poetic thought, or that I had the right to try and convey it to you in words.*

THE PUBLIC HEALTH (LONDON) LAW CONSOLIDATION AND AMENDMENT BILLS.

The following are the most salient portions of the report presented by the Sanitary and Special Purposes Committee to the London County Council at a recent meeting, as already mentioned by us. The report, as already stated, is the result of the deliberations of a joint Committee consisting of representatives of the Sanitary Committee, the Housing of the Working Classes Committee, and the Parliamentary Committee:—

"The objects of the Bills are to consolidate into one statute the various enactments relating to the public health and sanitary administration of London, now contained in about twenty-nine Acts of Parliament commencing with Michael Angelo Taylor's Act of 1817; and to so amend and supplement the consolidated provisions as to lead to a comprehensive system of sanitary administration so essential to safeguarding the health of the inhabitants.

Under the Public Health Act of 1875, the country generally has had the benefit of a fairly complete system of sanitary administration; but London was omitted from the operation of that Act, so that such imperfect measures as the Nuisances Removal Acts and the Sanitary Acts, which have long been repealed so far as the rest of England is concerned, remain in force in the metropolis alone. This anomaly will now be remedied, and the sanitary provisions which are scattered through the Metropolis Management Acts, the Police Acts, the Diseases Prevention Acts, and a large number of other Acts, are now gathered up into one statute, properly arranged, and made consistent.

The proposed Consolidation and Amendment Bills do not, however, deal with the whole subject of public health law in London, inasmuch as such subjects as the disposal of sewage, water supply, hospitals, highways, and streets, the provision of markets and abattoirs, factory regulations, bakehouses, common lodging-houses, &c., are still dealt with by separate statutes, all of which it may be hoped will, as soon as practicable, also be consolidated and amended.

The law relating to nuisance in London, and to sanitary matters generally, is at present mainly put into force by the Vestries and District Boards; but the Police, the Metropolitan Asylum Managers, and other authorities, are responsible for enforcing many of its provisions, and in some respects, undesirable as that may be, perform some of the functions of a sanitary authority. Much of the present law is also permissive, and the general result is a want of uniformity and effectiveness which is notorious, and of which instances frequently occur.

It will be remembered that a Consolidation Bill was, at the instance of the President of the Local Government Board, prepared last year, and that the Council at his request submitted to him a series of recommendations, 110 in number, for its amendment. The Council will be glad to know that nearly the whole of these recommendations have been incorporated in the present Bills, the only material ones not so adopted being those referred to at the end of this report.

The following are the more important amend-

* To be concluded in our next.

ments included in the Bills. The Bills propose to remove a serious difficulty in sanitary administration by extending the power to deal with anything which is a nuisance or 'injurious' to health, to anything that is 'prejudicial' or 'dangerous' to health. This largely widens the general scope of the Act, as it will no longer be essential in putting the law into force to prove injury to health. It has been sometimes found impossible to prove to the satisfaction of the court that even an admittedly serious nuisance was injurious to health. It will be now sufficient to show, in order to enforce the abatement of a nuisance, that such nuisance will endanger health, and any person will now be able to give information of a nuisance, while hitherto only the person affected by it has been in a position to do so.

Additional powers are also given for dealing with trade nuisances by widening the definition of offensive trades, and sanitary authorities are themselves made liable if they cause nuisance in the removal or destruction of refuse; and for the purpose of enforcing these provisions the Council is deemed to be the sanitary authority.

The power of requiring proper water-closet accommodation in buildings is enlarged, and the Council is authorised to make, and the sanitary authority is required to enforce, by-laws with respect to water-closets, earth-closets, ashpits, and cesspools, and the proper accessories thereof in connection with buildings, whether erected before or after the passing of the Act, and for their being supplied with water. The law as to unsound food is extended, so that all persons responsible for the preparation of such food for sale, and for selling it, can be punished. The Bills make it a nuisance when a house has not proper water supply, and provide for closing it. They also require that before a new house can be inhabited the sanitary authority shall be satisfied with the water supply provided. . . .

Underground rooms are also dealt with, and where two or more underground rooms are occupied together, each of them is to be deemed to be separately occupied so as to be liable to the provisions of the Act. Mortuaries are to be provided in every district by the sanitary authorities; and where required by the County Council, rooms must also be provided for the holding of *post-mortem* examinations; and permissive power is given to the sanitary authority to provide rooms for the holding of inquests, to the cost of which the County Council may contribute.

The sanitary authorities are also required to appoint qualified medical officers of health and a sufficient number of sanitary inspectors; and on a representation from the County Council that the sanitary authorities have failed to appoint such inspectors, the Local Government Board may by order compel them to do so.

It is also proposed to transfer the execution of the Smoke Acts from the police to the sanitary authority.

Lastly, the Bills place very considerable additional duties and responsibilities upon the Council, and these include the making of by-laws for the prevention and suppression of nuisances, and for other matters; the licensing of knackers' premises; and the duty of acting with respect to the removal of any nuisance, the institution of any proceedings, or the enforcement of any by-law where the Council is satisfied that the sanitary authority is in default. There is also the further duty of making a representation to the Local Government Board when the sanitary authority is in default in executing any duties. That Board will then be able to make an order, which may be enforced by *mandamus;* or the Board may appoint the Council to perform the duties as to which the sanitary authority is in default.

A few of the recommendations made by the Council last year have not been incorporated in the Bills, and some of these we think of sufficient importance to make it desirable that the Council should again endeavour to obtain their adoption. We have accordingly included them in the suggestions for the amendment of the present Bills which we have prepared, and which for the sake of convenience we have arranged in tabular form in a separate printed document, and submit herewith.

The remaining recommendations made last year by the Council, and not adopted in the Bills, include one for incorporating some of the provisions of the Metropolis Management Acts which relate to sewers and drains, but as such provisions appear to be outside the scope of the present Bills, we do not propose to again press the suggestion. The Council also made some suggestions relating to infectious diseases, to the supervision of common lodging-houses, and to the regulation of houses let in lodgings, and these also have not been adopted.

The Council's request for a general power to make by-laws for the prevention and suppression of nuisances in the County, and for regulating any matters necessary for the health and good sanitary condition of the County, has been partially complied with by section 9 of the Amendment Bill, which will enable the Council to make by-laws for preventing certain specified nuisances.

The President of the Local Government Board is to be congratulated on the able measure he has prepared, which we believe will be the means of improving the health and comfort of the inhabitants of the county."

The suggestions referred to in several instances simply consist of substituting the word "shall" for the word "may." For instance, in clause 76 of the Consolidation Bill, page 39, line 26, the Council propose this substitution. The clause, as it stands, provides permissively for making by-laws for the registration of houses let in lodgings; but, as the Committee say in their "remarks" on the suggested substitution of "shall" for "may" in this case, "there is no reason why the by-laws should not be made. Sanitary authorities can in the by-laws give themselves a discretionary power as to the houses to be registered."

In regard to the Amendment Bill, the Committee suggest the substitution of the word "dust-bin" for "ash-pit" in clause 8, and throughout the Bill, on the ground that "ash-pits" (as usually understood) do not exist in the metropolis. In paragraph *b* of clause 9, the Committee suggest the substitution of the word "premises" in lieu of the words "manufactory, brewery," &c., so as to make the clause as comprehensive as possible. To sub-section 1 of Clause 22, which relates to the power of the Sanitary Authority to provide public sanitary conveniences, the Committee suggest the addition of the following words:—"And such section [sec. 68 of the Metropolis Management Act, 1855], shall also extend to the provision of conveniences below the level of the ground." These words are suggested because the Council has been advised that there is some doubt whether the Sanitary Authority now have power to provide underground conveniences. In Clause 33, sub-section 4, the Committee suggest the substitution of the word "every" for "any," and the substitution of the words "shall," &c., for "may," so that the clause will read "*Every* sanitary *shall*, if required by the County Council, provide and maintain in connexion with a mortuary or a building for the reception of dead bodies for *post-mortem* examination proper accommodation for the holding of inquests," &c. In Clause 34, which relates to underground-rooms, the Committee suggest the addition of the following words at the end of line 33, viz., "which shall be not less than 2 ft. above the surface of the ground nearest to such window." The clause as it at present stands in the Bill prohibits the letting or occupation of any underground room which was not let or occupied separately as a dwelling before the passing of the Act unless (among other requisites enumerated) it possesses "one or more windows opening directly into the external air with a total clear area of the sash-frames equal to at least one-tenth of the floor area of the room, and so constructed that one-half at least of each window of the room can be opened, and the opening in each case extends to the top of the window." The words suggested by the Committee, and just quoted by us, are intended to be tacked on to the end of this provision. Several other suggestions consist of proposals to insert the words "County Council" in lieu of the words "Local Government Board."

The suggestions were approved, and the Joint Committee was authorised to submit the same to the President of the Local Government Board.

THE ARCHITECTURAL ASSOCIATION VISITS:

THE IMPERIAL INSTITUTE.

THE seventh sessional visit took place on the afternoon of Saturday, May 9, and was largely attended by members interested in the buildings of the Imperial Institute, and the designs of the architect, Mr. T. E. Collcutt. The buildings will soon be completely roofed in, and parts of the interior have been pushed forward sufficiently to accommodate a large portion of the staff which in future will occupy the premises. The building is hardly in as interesting a state as it shortly will be, as the interior fittings are not yet in their place, and the elevations are still mostly obscured by scaffolding, so that it is difficult to form much opinion of the ultimate effect. The central tower is gradually rising above the level of the roof, and for this work an ingenious interior scaffolding is being used, which is raised bodily by means of four screw-jacks, about 2 ft. at a time, as the work proceeds. This building has been previously illustrated and described in our pages.

Illustrations.

CENTENARY HALL, BATTERSEA RISE, S.W.

THIS is an illustration of a portion of the important additions to the Royal Masonic Institution for Girls, recently opened by H.R.H. the Prince of Wales, who was accompanied by the Princess and her daughters, as a commemoration of the centenary of its foundation and to the memory of Chevalier Ruspini, its founder, in 1788.

It is a red brick building, with Bath stone dressings, having deep buttresses on each side, which are utilised by enclosing nearly the whole depth of buttress, with a wall to the height of 20 ft. from the floor, thus forming deeply-recessed bays, with a fireproof floor inserted about 10 ft. high, and projecting over each bay into the hall. This is approached by a turret-stair at each angle, the buttresses being pierced at this level to form an ambulatory as well as galleries in the triforium, connecting the main gallery with the Minstrels' gallery, and encircling the building.

The dimensions are 104 ft. 6 in. long by 40 ft. 6 in. wide between the main walls, arcaded in seven bays, and 50 ft. high from floor to the centre of the elliptical ceiling, supported by deep coves on each side, formed with modelled fibrous plaster, carried by a light iron-framed and truss roof, designed by Mr. H. G. Huxley, C.E.

The walls are lined to the height of 12 ft. 6 in. with a teak dado and balustrading to gallery-fronts, executed by Mr. T. Gibbons, of Dunmow. The windows are all filled with stained glass, containing in cartouches the shields of the various subscribing lodges, with the exception of the large west window, which, being the gift of the Grand Lodge of England, contains the portraits and shields of the grand officers, with panels representative of the Virtues, &c. This work has been executed by Mr. Ed. Frampton, of Buckingham Palace-road. The heating and ventilating work has been executed by Messrs. Haden, of Trowbridge; and the general contract was carried out by Mr. B. E. Nightingale, of Albert-embankment, Mr. Wm. Tookey acting as clerk of works, the erection of the hall being under the superintendence of Mr. Fred. G. Knight, architect.

The whole of the works were under the immediate superintendence of Messrs. Henry Arthur Hunt and Ralph Clutton, the honorary architects of the institution.

The drawing, by Mr. F. G. Knight, is now hung in the Royal Academy Exhibition.

CAMPANILE, ZARA CATHEDRAL, DALMATIA.

THIS is the drawing, No. 1,734 in the Royal Academy Exhibition, referred to in our last notice of architecture at the Royal Academy. This is the second design which the architect has made for completing this tower, the first having been exhibited at the Royal Academy in 1889, and published in the *Builder* for May 25 of that year. A full description of the history of the tower, and of its present state, communicated by Mr. Jackson, was published along with that illustration, and to this we must refer the reader for details. We may just mention again here that the tower is ancient up to the string course just clear of the cornice of the church; it has never been carried further, and the remainder is Mr. Jackson's proposed completion.

The first design, it appears, contained some features which provoked criticism from the Central Commission of Art and Ancient Monuments at Vienna, to which all designs dealing with historical monuments have to be submitted. An entirely new design was therefore made, which is the one here shown.

The original design contained two new stories only below the parapet, above which was an open octagonal lantern with large pinnacles standing free at the angles, and a short stone spire over. In the present design it will be seen that the octagon lantern is omitted; there are three new stories below the parapet, and the short spire rises directly from the parapet level.

BUNGALOW HOUSES.

THE house entitled "A Bungalow" was designed to be built near a village on the south coast. The walls would be faced with local

stone, and the roofs covered with patent pantiles. The woodwork throughout will be painted white. The other drawing, "Proposed Bungalow House, Surrey," shows a picturesque design of different character. The illustrations are both from drawings by the architect, Mr. R. A. Briggs, which are hung in the Royal Academy Exhibition.

ST. MATTHEW'S PARISH CHURCH ROOMS, CLAPTON.

THIS design was selected, in a limited competition, the plainer brick design being carried out. The work has been executed by Messrs. McCormick & Sons, of Canonbury, under the direction of Mr. Arnold Mitchell, the architect. The original drawing is now hung at the Royal Academy Exhibition.

ARCHITECTURAL SOCIETIES.

ARCHITECTURAL ASSOCIATION (LONDON).—At the last meeting of the Advanced Class of Construction and Practice a paper was read by Mr. J. W. Hall on the "Chemical Analysis of Building Materials." Messrs. Satchell, Yates, Taylor, Collins, Beale, and Goldsmith (Chairman) took part in the discussion, and Mr. Oswald Hamilton (who attended as deputy for Professor Watson Smith, of University College) apologised for the unavoidable absence of that gentleman, and gave some valuable demonstrations of analyses of mortar and examples of the various proportions of materials he had found therein. The officers nominated for next session were Messrs. F. T. W. Goldsmith, Chairman; S. B. Beale, Vice-Chairman; and C. H. Brodie and W. Henry White, honorary secretaries.

BIRMINGHAM ARCHITECTURAL ASSOCIATION.—At a meeting of this Association held on Tuesday last, the President (Mr. T. Naden) being in the chair, the following gentlemen were elected as officers for Session 1891-92:—President, Mr. W. Hale, F.R.I.B.A.; vice-president, Mr. F. Barry Peacock; hon. treasurer, Mr. C. E. Bateman; hon. librarian, Mr. H. Beck; hon. secretary, Mr. H. R. Lloyd, A.R.I.B.A.; Council: Messrs. W. H. Bidlake, M.A., A.R.I.B.A., W. Doubleday, W. Hawley Lloyd, T. Naden, H. Rawson Bewlay, H. Buckland, and S. F. Harris. At the conclusion of the business a paper on "Oxford and the Neighbourhood," was read by Mr. W. Salt Brassington, who gave an exceedingly interesting description of many of the most noteworthy of the buildings of the city and district. After briefly dealing with the legends and facts of the early history of the city and University, Mr. Brassington proceeded to describe the points of interest to which he wished to draw attention in the churches and colleges of the city, illustrating his remarks throughout by the aid of very numerous excellent lantern views, among the examples thus chosen being the Cathedral, the Church of St. Mary Magdalen, Iffley Church, the Church of St. Giles, the Chapels of Merton, New, Brazenose, and Keble Colleges, parts of Christ Church, Oriel, Worcester, Balliol, All Souls', and Trinity Colleges, the garden front of St. John's College, the "Tom" Tower, the Tower of Magdalen, and the Pugin Gate at the last-named college. In concluding his paper, Mr. Brassington commented severely on the character of much of the nineteenth century architecture of Oxford, especially protesting against the "Queen Anne" work which has been introduced, and regretting the replacement of old work by modernising the cases of Balliol College and the Keble Gate. A hearty vote of thanks to Mr. Brassington, accompanied by considerable discussion of the latter part of his paper, brought the meeting to a close.

CARDIFF ARCHITECTS' SOCIETY.—On the 11th inst., at the Town Hall, Cardiff, before the Cardiff Architects' Society, a lecture on the "Architecture and Costume of the Fourteenth Century" was delivered by Mr. T. M. Lockwood. The lecturer was aided in his comparisons of the architecture and costumes of that period with those of the present day by a number of sketches.

SHEFFIELD SOCIETY OF ARCHITECTS AND SURVEYORS.—The annual meeting of this society took place on Tuesday evening, at the School of Art, when Mr. Innocent, Vice-President, presided, in the absence of Mr. Fowler, the retiring President, who was in London. After general business, the secretary's and treasurer's reports were read and adopted. They showed the society to be in a flourishing condition. A ballot took place for the election of president, officers, and council for the coming year. Mr. C. J. Innocent was elected President; Mr. C. Hadfield, hon. secretary; Mr. J. B. Mitchell Withers, treasurer. Council:—Messrs. Flockton, Fowler, W. F. Hemsoll, W. H. Lancashire, and W. C. Fenton. Mr. Paul Waterhouse, M.A., of London, read an interesting paper on "The Rising Generation of Architects." In opening, Mr. Waterhouse drew attention to the remarkable signs of the times in the architectural world. Referring to the much-debated subjects of registration, examination, and education, and to the special conditions of the present age, as exemplified in the public interest in architecture, and the energy of landlords in improving their estates, he augured that it was something more than curiosity which prompted an inquiry into the future. Architects were beset by new, and, in some respects, embarrassing conditions; much greater knowledge of special branches of science was required of them now than formerly. The present age was typified by an unusual catholicity of style, and they had also to face—in the great increase of numbers in the profession,—a problem which was at once an encouragement and a difficulty. He did not wish to deal with the registration question except to express a conviction that whether the profession become a close one or not, the existence in the future of a large body of examined architects could not fail to influence the public in their choice of a professional adviser in architectural matters. He felt, with regard to the disputed value of examinations, that the recent attack had been greatly misdirected, and that in some respects the outcry against examination of artists amounted to a supposed theory that the test of an artist's value (be he architect or painter) lay in his own opinion of himself. Surely it was an absurdity to suppose that it was beneath the dignity of any artist to submit himself to the critical judgment of others, especially if that judgment were confined to the more material or technical aspect of his art. Turning to the wider question of architectural education, the lecturer urged a plea for more extended education in the highest sense, both at school and in after life. He admitted that in its ideal state a perfect pupilage in a perfect office would be the best technical training; he advocated, at the same time, the recently-extended methods of the Architectural Association and of kindred bodies, and hoped that in the future architects might be so happily circumstanced as to make their education something more than technical, and their interests more than professional. He feared that the hurry of the age and the pressure of modern work so narrowed the studies of architects that they compared but ill with the larger minds of the past. After some remarks on the subject of style, in which he specially assailed the modern struggle for originality at any price, and suggested that the worst architectural errors of the day were not errors of insipidity or servile imitation, but rather unnatural strivings after capricious invention, he gave a few minutes to the discussion of overcrowding in the architectural ranks, and drew the attention of some of the "unemployed" to the real need of good literary writing on architectural subjects, a pursuit against which he considered there was an unnatural prejudice. Mr. Waterhouse concluded his remarks by expressing the hope that his words, though hardly prophetic, might have in some way stimulated serious thought about the needs of the future.—On the motion of Mr. J. B. Mitchell Withers, seconded by Mr. C. M. Gibbs, and supported by Messrs. C. Hadfield and H. W. Lockwood, a vote of thanks was accorded to Mr. Waterhouse for his interesting paper.

EDINBURGH ARCHITECTURAL ASSOCIATION.—The Edinburgh Architectural Association visited Penicuik and district on Saturday last. The weather was all that could be desired, and the gathering of members was very large. Reaching Penicuik by train, the party drove in brakes to Newhall House, tenanted by Mr. John Blair, W.S., from whom and Mrs. Blair the party received a very cordial greeting. The leader of the party was Mr. Hippolyte J. Blanc, who explained that the present house was the outcome of many alterations and enlargements from the simple, but dignified, Hall House of the middle of the 17th century to the more commodious residence created by the increased requirements of modern times. The existing house, he explained, had supplanted in 1646 the earlier feudal residence of the Creichtounes,—a branch of a family well known, and of considerable influence in Midlothian during the preceding three centuries. Their castle had, in its turn, supplanted a pre-existing monastery which occupied the same site, and reminiscences of which may be still traced in the names of neighbouring places,—such as Monksburn, Monkshaugh, Monksrig, Monksrood, &c.,—and, further, in the name of Spittal Farm, which suggests the existence of an hospital in connection with the monastery. From illustrations, photographed and enlarged from old prints, the form and dimensions of the house when first built were shown, and, by the aid of a plan lent by Mr. Bryce, architect, the progressive building changes were traced out. Mr. Blanc explained that the estates became possessed by Alexander Pennicuick, father of the well-known author, poet, and physician of the same name, who succeeded him in 1652, and that, after several changes of owners, they passed into the hands of Sir David Forbes, distinguished alike for his taste as for his legal knowledge. Very early in the eighteenth century Sir David cleared away nearly all the castle, and began the present house, and, with his son and successor, John, of like taste, had it richly furnished with tapestries, and the walls and ceilings elaborately painted with representations of classic subjects. The succession of owners was traced to the present proprietor, Mr. H. F. Brown, and in closing the notice of the architectural features of the house, Mr. Blanc referred to the great interest it possessed as being the chief scene of Allan Ramsay's delightful pastoral poem, and where many a happy meeting took place of the distinguished literati, who, under Sir David Forbes and Dr. Pennicuick, assembled to hear the first of Allan Ramsay's verses. References were also made, by quotations, to the localities surrounding the house from which the various scenes in the poem were taken. Mr. Blair then conducted the party over the gardens, where were viewed some sculptures, and two interesting sundials, one of which is attached to an obelisk erected in 1810 in honour of Allan Ramsay. The interior of the house was examined, and the "Portrait Room" visited, in which is collected a very interesting series of paintings of those who were wont do assemble with Allan Ramsay to hear him recite his poem. The portraits are chiefly by Aikman, and are in excellent preservation. Mr. and Mrs. Blair having been thanked for their kindness and for the privilege extended to the Association, the party next proceeded to Brunstane Castle, a ruined fortalice of the sixteenth century. The remains show the internal dispositions of apartments fairly well, and some interesting features of construction belonging to the period were pointed out. Mr. Blanc explained that this had been originally a possession of the Creichtonnes, who held the lands adjacent since 1373, from David of Penicok. The original castle was burnt to the ground shortly before the Reformation, the proprietor being attainted for high treason, and in 1568 the present edifice was erected by John Creichtonne, a son of the attainted owner. The estates passed out of the hands of the family of Creichtonne in 1609. Continuing the route by the valley of the North Esk, the party next reached Penicuik House. Here Mr. Blanc explained the mansion-house in plan and exterior elevations, tracing at the same time the line of proprietors of the estates after the Pennicuicks to the first of the distinguished family of the present proprietor, who purchased the estates in 1646. The present house, he explained, was the outcome of a design by Sir James Clerk, the third Baronet, who erected it in 1761. But a study of the detail, combined with a knowledge of the fact that the distingnished architect, Robert Adam, was by marriage related to the proprietor, led, Mr. Blanc thought, to a conviction that Adam must have been largely consulted during the progress of the work. The interesting relics, the Queen Mary missals, and the Roman antiquities were viewed in the hall, and also the valuable collection of portraits by Aikman, Raeburn, and others in the dining and other rooms. The chief apartment of interest, however, is the drawing-room, a handsome, lofty room, built as a picture-gallery, and now known as Ossian's Hall, from the splendid ceiling-paintings by Alexander Runciman, illustrative of passages in the poems of Ossian. A most instructive and enjoyable afternoon was spent, and Mr. Blanc was duly thanked for his interesting papers.

GLASGOW ARCHITECTURAL ASSOCIATION.—At the usual monthly meeting of this society a paper was read by the President, Mr. William J. Anderson, entitled, "An Architect of the Sixteenth Century: His Work and Times." Baldassare Peruzzi, the subject of the notice, lived 1481-1536, and therefore belonged to the second period of the Italian Renaissance. Of this phase of the style he is the master, though his works are but few in number and by no means imposing in size. In excellence of proportion and detail, however, they are full of interest. The architect was also a painter, but not of first importance, and but few samples are extant. Mr. Anderson was able to show an almost complete series of his architectural works by photographs specially obtained from Italy, by prints, sketches, and measured drawings. At the close of his paper, after discussion and criticism, a hearty vote of thanks was awarded him.

THE ARCHITECTURAL ASSOCIATION
SOIRÉE.

THE annual *soirée* of the Architectural Association was held on Thursday, the 7th inst., in the Westminster Town-hall. The entertainment consisted of a "musical burlesque" entitled "At Loggerheads; or, Romeo re-versed and 'punned' into an A. A. Burlesque," written by Mr. Theo. Moore, and produced by the A. A. Lyric Club. The cast was as follows:—Romeo, Mr. A. Bramwell Thomas; McCutio, Mr. P. J. Sutton; Paris, Mr. A. C. Bulmer Booth; Tybalt, Mr. H. O. Cresswell; Monty Cute, L.C.C., a builder, Mr. E. Wonnacott; Capulet, F.R.I.B.A., D.S., &c., Mr. Harry Sirr; Peter, Mr. W. Henry White; Balthazar, an advertising agent, Mr. Theo. Moore; Juliet (architectonic personification), Mr. Frank Galsworthy; and Nurse, Mr. C. H. Brodie. The first scene of Act I. was supposed to be laid at Verona, and discovered Tybalt and Paris, Romeo and McCutio, all four architectural students of Verona, discussing the educational and examination questions. Scene ii. opened in the hall of a well-known museum, disclosing the Nurse (typifying the leading architectural society) interrogating her private secretary,—whose "make-up" was evidently aimed at the representation of a well-known official—as to the issue of invitations to the "great triennial swarry." Among the guests who now arrive are Capulet, Monty Cute, Juliet, and the Nurse. Monty Cute, after conversing with Capulet for a little while, asks, "Who's the girl there, with the sleepy matron?" Tybalt, overhearing, exclaims:—

> "Oh do not all the arts combine to gild her?
> Our stately Architecture! You, a builder,
> Are never like to know her!"

Capulet is asked by Monty Cute to introduce him to the lovely Juliet, but he demurs on the ground that he "does not know her well." In Act 2, scene i., there is a little skit on the examination. Capulet is the examiner, and one of his questions is:—"Describe a dog-iron, and a dog-leg stair, and say whether they have any connexion with Canina?" Afterwards McCutio becomes assistant to Capulet, who patronisingly allows him to have the use of his library, which consists of a few out-of-date books, and a well known catalogue of iron castings, which Capulet says he always uses "in designing ornament." These books, he tells McCutio, will be more useful for study "than the list of books recommended by the Institution." "Which," says McCutio, "they seem to have confounded with their library catalogue." In scene iii. Monty Cute and Capulet meet, and after exchanging greetings, Monty Cute explains that he has just come from the County Council, where he has carried his proposition that District Surveyors must not practise privately, confidentially adding that it was his aim "to get a lower class of men" to fill those offices, so that he might the better carry on his vocation as an avowedly unscrupulous builder. There was much more to the same effect.

The histrionic and vocal ability displayed by the actors was considerable, and the author was called to the front at the close of the performance. Mr. F. T. W. Miller officiated as stage manager, and most of the scenery was lent and painted by Mr. Percy D. Smith, assisted by Mr. E. Wonnacott.

"ON STRIKE."—By an oversight in our article on the Royal Academy Exhibition last week, the fine picture exhibited under this title was mentioned as the work of Mr. Fildes, instead of being attributed to its actual author, Professor Herkomer.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday last, Sir Thomas Farrer, Vice-Chairman, in the chair, in the absence of Sir John Lubbock, the Chairman, who was absent through an attack of influenza.

The Water Question.—The Parliamentary Committee presented the following report on the Water Bills now before Parliament:—

"We have had an opportunity of seeing and considering the report of the Special Committee on Water Supply and Markets to be presented to the Council on the 12th inst., and desire to express our general concurrence in its terms and in the recommendation made. The report, however, does not point out the manner in which effect shall be given to the Committee's recommendation if adopted by the Council, and, in order to make this clear, we recommend—

'(*a*) That the Special Sub-Committee of the Parliamentary Committee on the Water Bills be instructed to negotiate and enter into an agreement with the Corporation of the City of London on the following basis: the placing the control of the London Water Supply in the hands of a Statutory Committee of the Council of moderate size, on the understanding that one-eighth of the members of the committee are to be nominated by the Corporation, leaving seven-eights to be appointed by the Council: the details of administration to be left to the Statutory Committee, but all questions of policy, terms of acquisition of the Water Companies' undertakings, charges to consumers, and finance, to be subject to the control of the Council.'

We further recommend—

'(*b*) That the Sub-Committee be authorised to submit, through counsel, the result of their negotiations to the Select Committee of the House of Commons which is now considering the Water Bills.'

We have further to report, with reference to the water question, that it has been intimated to us by the agent that more evidence from provincial towns is needed to show that the municipal system of water supply works practically and conveniently. We concur in this opinion, and have given the necessary instructions. We recommend—

'That the course taken by us in instructing the agent to obtain additional evidence of the nature above referred to, be approved.'"

These recommendations were agreed to, and after transacting other business, the Council adjourned until Tuesday, June 2.

"A NATIONAL SCHEME OF MAIN DRAINAGE."

AT the last monthly meeting of the Association of Public Sanitary Inspectors, held on the 2nd inst., at Carpenters' Hall, London Wall, a comprehensive scheme of main drainage was propounded by the President of the Association, Dr. B. W. Richardson. The attendance being very large, the lecture was given in the large hall. Among those present were Earl Fortescue, Mr. H. Stephens, M.P., Professor Hughes, Dr. Danford Thomas, and Mr. D. Chadwick.

Commencing by expressing satisfaction that certain plans which he had suggested during a long sanitary career had not been adopted because that might have impeded later and more perfect plans, Dr. Richardson said that he had kept in the secrecy of his study, for more than twelve months, a matured scheme of main drainage on a national scale, which he had refrained from making public until a long interval had passed, in order to give time for the development in his mind of objections to it. The scheme still seeming to him a good one after that long interval, he had resolved to delay its publication no longer. He had long deplored the absence of system which characterised all our efforts after sanitary improvement, and the first desideratum appeared to him to be a systematic method which could be made applicable everywhere,—a system that would be national in the strictest sense of the word. The fact that the country had already been surveyed, laid out, and levelled from end to end, with infinite skill, in the network of railways intersecting it, had struck him, and he conceived the idea of constructing along the lines of the nation's railways conduits of iron tubing or brickwork into which the sewage of populous places could be pumped for carriage and ultimate distribution to whatever spots might be benefited by the fertilising principles contained in it. The practical difficulties to be encountered were not formidable. The plan could be as easily carried out as the laying out of a new telegraph line. No line of railway would be injured, conducting tubes of very small diameter being all that would be required, except in the vicinity of the larger towns. The main being always in current towards the open country, with a minimum quantity of water to carry the solid material, every district would have its own main drain into which the local drains would run, and what was now so real a nuisance that it was cast at great expense into the sea, would then become what it ought to be,—a source of wealth readily and immediately utilisable upon land languishing for it. In the largest towns there would be numerous stations, not storage depôts, but starting-points, and the necessity for enormous sewers, even in London itself, would not exist. Some 150 of such stations distributed over the outer area of Greater London would receive the drainage of the houses through sewers, uniform in construction, and in unbroken continuation. The uncertain cleansing by flushing would give place to a continual exhaust, which would invariably suck in air through every gully and hole, and upward rushes of sewer-gas would be unknown. All the wants of the community would be provided for by a uniform system, and uniform rates of charges might be made which would realise the most important economies, and, at the same time, everywhere confer the advantages of equal cleanliness, health, and comfort. Working through the capillary network laid out for a different purpose, the plans were so well adapted for the new purpose that they could not be bettered even if we were to commence *de novo*. Who was to take the initiative in carrying out such a scheme? The Government, County Councils, or the railway authorities? The latter might, with the happiest results all round, take up the scheme as a profitable enterprise. In a single decade the whole country might be completely drained, and the sewage be satisfactorily utilised. Everything was ready to hand. No new line would need to be cut, or tunnel excavated, while all forms of power,—steam, wind, water, electricity,—would be available. The railway companies could best work the plan, for, while on one side of their lines carrying away sewage, they could on the other side be bringing to our towns and cities the pure water they all need from lake and spring, for with their exquisite levels, these railways already intersected every source of pure water supply throughout the country. A new industry would be thus created, and after finding new employments in every part of the country, our engineers and workmen would be called upon by foreign countries to carry out similar schemes abroad, for our national system of main drainage would be copied throughout the world, as our railway system had been copied.

A vote of thanks to the president for his paper was proposed by Mr. H. C. Stephens, M.P., and supported by Earl Fortescue.

In the course of his remarks, Mr. Stephens pointed out that the scheme proposed by the doctor would facilitate a return to the separate system which formerly prevailed, but which had long been rendered impossible, even by the working of the Public Health Acts themselves. He was not himself an advocate for such wide-reaching schemes, believing, as he did, in the superior effectiveness of more localised action.

Lord Fortescue said he was old enough to remember the outcry raised against sanitary improvement in times now happily gone by. If the demand to turn the pig out of the precincts of the dwelling-house was no longer resented as an outrage on freedom and on every Englishman's birthright of personal liberty, it was greatly due to the teachings of their philosophical president, and of his predecessor in the chair, the late Sir Edwin Chadwick, whose personal friendship he (the Earl) had had the privilege of possessing for fifty years.—The vote having been given with acclamation, Dr. Richardson briefly replied.

In advance of the public meeting a special general meeting of the members of the Association was held to receive a report of the action already taken by the Council in regard to the new Public Health Bills, and to consider what further steps might be necessary. The Chairman of the Council (Mr. Hugh Alexander) had written to the President of the Local Government Board pointing out that "while Inspectors appointed after the passing of the new Bill could be only dismissed with the consent of the Board, no similar provision was made for the protection of existing officers." The action of the Council was approved, and satisfaction was expressed that three of the points urged by the Association upon the promoters of the Bill had already been incorporated in it.

COMPETITIONS.

TOWN HALL, NEWRY, CO. DOWN.—On the 8th inst. a special adjourned meeting of the Newry Town Commissioners was held in their offices, Marcus-square, for the purpose of considering the designs for the proposed new Town-hall. The plans before the meeting bore the following mottoes:—"Caroline," "Common Sense" (No. 2), "Clanrye," and "Light and Air." The Town Clerk (Mr. R. H. Doherty) said that the Committee of Public Works had submitted the consideration of these plans to the monthly meeting of the Board, of which that was the adjournment. A report of Mr. Meares, C.E., Town Surveyor, to the Committee was then read, in which the chief features of the plans were described. On the motion of Mr. M'Cann, seconded by Mr. Marron, it was resolved to obtain the opinion of a competent architect as to the plans. Mr. Redmond then moved, and Mr. Fowler seconded, the motion that Mr. Drew should be asked to act as architect-assessor, and this was agreed to

Books.

Terres Cuites Grecques Photographées d'après les Originaux des Collections privées de France et des Musées d'Athènes. Par A. CARTAULT. Paris: Armand Colin et Cie., Editeurs.

PROFESSOR A. CARTAULT'S researches in connexion with the subject of Greek terra-cottas are already well-known to the archaeological world. The object of his present work he states distinctly in the preface. He wishes to fill a definite literary vacuum. The public collections in the great museums of Europe are accessible both to the specialist and the general educated public, both by the fact that they are free and open to all-comers and also that their official catalogues are published for the most part at a moderate price. Private collections, when published at all, appear in large publications, "de luxe," available only to the most wealthy amateurs. In his present book, Mr. Cartault aims at giving a selection of the most important specimens in the principal private collections of France; a few from the public museum of Athens are added. The collections from which he draws are those of MM. Bellon, Secuyer, Gréan, Spitzer, Rothschild, Duruflé, De Clercq, and Madame Darthès. The existence of these and other private collections have been known to the educated public since the exhibition of terra-cotta at the Trocadero in 1878. We have now the opportunity of studying not only the series of twenty-nine beautiful photogravures with explanatory text, but we have, in the introductory essays, first an admirable bibliography of the subject, and, second, a discussion of the principal problems that arise in connexion with the study. The bibliography is not a mere list, it is an admirable *orientation* of what is by now almost a pathless wilderness. It gives the main contents of the various books, the point of view of the authors, and the necessary caution when a theory is out of date. The book is not so popular in character as that of M. Pottier, which we recently noted, but just because of its frank facing of certain at present unsolved problems, it is likely to be special use to the amateur in terra cottas.

Die Griechischen Vasen mit Lieblings-Inschriften, von W. Klein. Wien, 1890. Reprint from Denkschriften der K. Akademie der Wissenschaften in Wien. Band xxix., II.

DR. KLEIN'S long-looked for monograph on the vases with "love-names" (we know of no other English equivalent for the awkward but now canonical German term, Lieblings-Inschriften) has been to some extent anticipated by Dr. Konrad Wernicke's pamphlet on the same subject, which we noticed some months ago. Dr. Klein's work is, however, by no means superfluous. Dr. Wernicke aimed rather at giving a conspectus of the principal facts connected with this particular class of vases. Dr. Klein gives a detailed catalogue, and, moreover, an illustrated one, publishing for the first time a number of hitherto inaccessible specimens, *e.g.*, we have as a frontispiece a plate from the Ashmolean Museum of Oxford, and from the same museum a beautiful white lekythos inscribed with the name Alkimedes. To criticise the work in detail would here be out of place; it is enough to say that it forms the indispensable appendix to the "Meistersignaturen" of the same scholar. The Imperial Academy of Science at Vienna enabled Dr. Klein to inspect personally the principal collections of Greece, Italy, France, the Netherlands, and England, and this book is the result. Dr. Harburg, too, placed at his disposal the drawings made for his great forthcoming work in the "Meisterschalen." Dr. Klein has wisely, in a catalogue work of this kind, made his references to the bibliography of his subject as brief as possible, only citing works of real scientific importance.

Historic Towns: New York. By THEODORE ROOSEVELT. London: Longmans, Green, & Co. 1891.

THIS is one of the "Historic Towns" series edited by Mr. E. A. Freeman and Mr. W. Hunt; and though at first thought one may be inclined to wonder how New York should have a claim to be included among a list of cities whose history is for the most part so much more venerable, yet the author makes a good case for his work. The history of New York, he says, "is the history of the largest English-speaking city which the English conquered but did not found, and in which, though the English law and governmental systen have ever been supreme, yet the bulk of the population, composed as it is and ever has been of many shifting strains, has never been English." The book many serve to remind us of what many of us have forgotten, that the city on Manhattan Island was really of Dutch foundation, and dates just two centuries and a half back. New Amsterdam was its original name, at the time when the greater part of Manhattan Island was still a tangled waste, and its small white population fighting for life with the Indians. It was in 1664 that it passed into the hands of the English, by the mere right of greater power; and the expedition which took it having been organised under the patronage of the Duke of York, afterwards James II., the inchoate city was renamed in his honour. After nine years it was retaken by the Dutch, but in a year and a half again given up to the English under a treaty, in 1774, and from that time was definitely known as "New York."

The author gives a sketch of the development of the city, and of the various movements and rival interests which contended and predominated from time to time, and about the history of which there is a good deal of the petty character which is associated with the politics of a vestry; and in art and letters the author confesses "we are not yet free from the spirit of colonialism." The sketch of the manners and tendencies of New York society at the period immediately preceding the war, shows how much such a struggle was morally wanted in order to shake the inhabitants into the belief in something better than the round of commonplace life they had become contented with, the description of which winds up with this brief indication of the æsthetic of everyday life of the period.

"In the summer they all went to Saratoga or to Europe; in winter they came back to New York. Fifth-Avenue was becoming the fashionable street, and on it they built their brown stone houses, all alike outside, and all furnished in the same style within—heavy furniture, gilding, mirrors, and glittering chandeliers. If a man was very rich he had a few feet more frontage, and more gilding, more mirrors, and more chandeliers. There was one incessant round of gaiety, but it produced no variety whatever, and little interest."

The plan of the city appended to the book is characteristic. About the point of the long narrow island over which it is built there is a certain amount of variety in the alignment of the streets; the remainder is like a vast elongated gridiron, with longitudinal lines at large distances and cross lines at smaller distances, with the "Central Park" forming a long parallelogram in the centre. A more dreary way of building a great city could not well be imagined. One wonders to find that the lake in the park, the Croton Reservoir, is left with an irregular outline, and not drawn out square like the rest. We may observe that the map is without a scale.

Retrospections, Social and Archæological: By CHARLES ROACH SMITH, F.S.A. Vol. III. Edited by J. G. Waller, F.S.A. London: Geo. Bell & Sons. 1891.

THIS is the third and concluding volume of the recollections of the late Mr. Roach Smith, which he did not live to see published, but of which a considerable portion was left ready for the press, and has been edited and added to by Mr. Waller. The book is a pleasant and readable, though rather rambling record of persons and places associated in one way or another with the subject of archæology. The notes at a visit to Stratford-on-Avon in 1868, when Mr. Roach Smith gave some readings for the benefit of the Shakespearean Museum, leave one to suppose that the poet was not much honoured in his native town. The Mayor's dinner was much better attended than the "Readings," and in the course of it a then well-known member for Birmingham, who was present, was heard to observe that he "was tired of the very name of Shakespeare."

Among the more directly archæological matters of which these are notes, is the subject of the Chester walls, the Saxon cemeteries of Kent, various archæological congresses, &c. The volume includes some illustrations to notes of a tour in France, including one of the curious Roman monumental column at Cussy. There is a great deal of interesting reading in the book, on a variety of subjects not linked together by any special plan.

Correspondence.

To the Editor of THE BUILDER.

THE THREATENED STRIKE AND LOCK-OUT IN THE BUILDING TRADE.

SIR,—It seems very sad, after a long winter, when building works were necessarily suspended, that the carpenters and joiners should bring on a further suspension now by their excessive demands. The point on which they lay most stress is a reduction of the hours of labour, and the men appear to ignore altogether the fact that dark, wintry weather must be reckoned on for, at least, three months every year. If the men would calculate the number of hours actually worked on buildings during the past twelve months, and divide the total by 300 (which is about the number of working days throughout the year), they would find an average of not more than eight or nine hours per day, which cannot be considered excessive. Building is, to some extent, similar to agricultural pursuits, in which it is necessary to "make hay while the sun shines." The carpenters and joiners have, however, I am told, large subscribed funds, which, judging by past experience, I fear they will have to get rid of before they listen to reason.

A SORROWFUL LOOKER-ON.

PROGRESS IN ARCHITECTURAL RESTORATION.

SIR,—I so frequently pass the lately-restored north transept of Westminster Abbey, and look at it always with so much pleasure, that I have ventured to think my criticism of it may be of some interest, especially as I feel that we must all be proud of the progress lately made in this branch of art.

I trust my criticism will not be regarded as in any way personal, I simply write what seems to me written on the stones of the building.

It will be remembered that this restoration was commenced under Sir Gilbert Scott about twelve years ago, and has just been completed under Mr. Pearson, who was entrusted with the restorations at Westminster Hall. The porches are Sir Gilbert Scott's work, and the upper part is Mr. Pearson's. To my mind, there is no comparison between the two; the porches, as one stands close to them, although full of carvings and rich mouldings, look harsh and uninteresting to a degree, and consequently resemble a great deal of modern work (amongst other, Lichfield West Front), whilst the upper part strikes one at once as being full of interest, and as having already toned down. In my opinion, this stamps the work as some of the best of modern work (like the beautiful new piers at Peterboro' Cathedral), and it certainly closely resembles ancient work.

Now to examine the different work in detail, to endeavour to understand why they strike one so differently, why the one seems imbued with the spirit of the ancients, and the other seems modern commonplace. I think, too, such an examination will prove the architect in *Punch* to have been wrong who stated,—"I can build you a house, but only centuries of time can give it the desired tone and interest."

Examining the porches (1) as to the design of the detail.

Note how each cap of each column resembles the others; how the same leaf ornament is repeated over and over again in endless monotony round outside the doors, and exactly the same diaper pattern is plastered over the walls round the doors; how regular and exactly the same in size are all the ornaments in the mouldings, just as if they are all cast in a mould or executed by some other spiritless and mechanical process.

Examine the side doors, how fearfully monotonous is that beautifully-designed ironwork repeated over and over again, until one ceases to care about it at all.

2. As to execution.

Note how all the stones from the same quarry seem purposely chosen of exactly the same tint, how regular they are in size, how the face of all stones is covered with chisel marks all exactly the same size and inclination, how sometimes a joint between two stones comes right through the centre of a carved leaf; how the joints in the arches, &c., are attempted to be concealed.

Then as to the upper parts:—

1. As to the design of the details.

Step back a few yards so as to see that rich arcade just over the porches.

At first one notices nothing peculiar, but certainly it seems less formal than the porches. As however, one examines the caps of columns, one finds to one's surprise that some are moulded, and some are carved without any apparent regularity; that the diaper work, both above and below the arcade, is wonderfully varied, that not two pieces of carving that are near one another are anything like

similar. It is no doubt owing to this irregularity, that the work looks so full of life and interest.

Looking higher still, one notices quite a different entasis given to the different stone roofs of the pinnacles; those that are most required for weight to counteract thrust having a much bolder curve than the lighter and more graceful ones; and see what an unobtrusive ornament is at the apex of these pinnacles, then compare all these pinnacles and ornaments with the vulgar pinnacles and ornaments near the Western Towers.

2. As to execution.

I think the softness or immediate toning down of the design is produced principally by the prominence given to the joints between each stone, to the varied grades of colour, and to the different sizes of the courses of the stones. Even greater care than this is taken, for if the surface of each stone is carefully examined, one finds that the tool marks which cover the surface are also carefully varied in size and inclination—in fact, I have heard that, in order to insure variety in this particular, Mr. Pearson insists on the employment of some left-handed masons.

Then, again,—another reason for the absence of harshness in the work,—examine carefully any of the repeating ornaments placed under corbel tables, or in the mouldings, and one actually finds that they are placed at different distances apart, and are not of uniform size. This may seem to some to be faulty work, so I hasten to give a practical reason, as well as to state the fact that it is invariably found in ancient work.

As the building is built of stones of different lengths, and as no joint should come through a piece of carving, it naturally follows that the spacing and sizes of these ornaments must vary with the varying lengths of the stones. One of the most beautiful ancient classical vases in the Louvre is in the Salle des Cariatides, and it stands on a modern base. Go and examine them, and your eye at once tells you where the modern ends and the ancient begins, for you find the modern ornaments as regular as if cut out by machinery, whereas the ancient ornaments, whose beauty "has stood the test of ages," were evidently spaced out by eye only, so great is the variety between them.

This freedom with the use of conventional forms undoubtedly requires, in architecture especially, a high intellect on the part of each individual workman, together with an eye "imbued with the spirit of ancient times," to control it, and to my mind this is seen to perfection in Mr. Pearson's restoration of this magnificent North Transept.

ARTHUR CAWSTON.

13, *Queen Anne's Gate, Westminster.*

THE R.I.B.A. ELECTIONS OF COUNCIL AND COMMITTEES.

SIR,—The excessively large number of the existing Council and Committee who are nominated for re-election leads me to suggest that it would probably be to the interest of the R.I.B.A. that a fair proportion of the Council should *not* be eligible for re-election for more than two years or so.

There are no less than *eighty* members of Council and Committees seeking re-election, and it is to be hoped that the members generally will give due consideration as to the advisability of giving new candidates a proper representation at the Institute.

"SUUM CUIQUE."

The Student's Column.

VENTILATION AND WARMING.—XIX

HEATED AIR COLUMNS.

THE use of heated columns of air to promote ventilation is one of considerable antiquity in practical working, having been long employed for the ventilation of mines.

There are various methods by which a column of heated air may be produced for ventilation purposes. An open furnace or fire-grate may be constructed at the base of a chimney, as is done at the Houses of Parliament, a stove may also be employed in a somewhat similar manner, or in conjunction with a sheet-metal pipe passing up the chimney; hot-water or steam-pipes arranged in coils or radiators; hot-water boilers or gas jets may also be used.

As the employment of heated columns of air to produce ventilation is almost universally directed to the exhaustion of the foul or vitiated air, the method necessarily implies the co existence of the difficulties which inevitably attend all exhaustion systems of ventilation, and which have been already discussed in speaking of draught and its prevention.

In the application of heated-air columns in order to obtain the maximum of efficiency with the minimum of expense, it is important to so proportion the height of the shaft or flue to the temperature of the moving column of air, that it shall escape at the top with no great excess of temperature above that of the external atmosphere.

Referring back to fig. 4, in chapter viii., we saw, in considering the movement of air by reason of temperature difference, that although the column of warm air, whose superior lightness to the external atmosphere causes the current, is theoretically of the height $H + h$, it is impossible to rely upon the activity of the portion h. Therefore, for the sake of economical working, it is desirable that h shall be as small as possible, and H as large as possible, or, in other words, that as much of the height of the heated column as possible shall be contained within the flue or shaft.

From this consideration we can readily understand that in ordinary cases the use of an open furnace or fire-grate is an extravagant and wasteful means of producing a heated air column for ventilation purposes. It is not every day that we have a Victoria Tower to serve as an aspirating shaft, and unless we have a considerable length of flue the temperature at its mouth will be wastefully high.

Again we learn that the proper place for our heating agent is at the bottom of our flue, not at the top, for only thus can we utilise fully the effective energy of our heated air.

The extravagance of furnaces results from the high temperature produced at the bottom of the flue by the combustion of the fuel. The temperature of the heated air as it leaves the furnace is usually above 2,000° Fahr., and it is almost impossible to effectively utilise this high temperature for ventilation.

Remembering that we have already in previous chapters found that the velocity of air currents produced by heat depends on the temperature, it may at first sight appear that the high temperature produced by a furnace would not be altogether a disadvantage. There are, however, two unfavourable concurrent factors in the problem, first that the high temperature produced is partly expended in raising that of the flue walls, for as the ratio between the temperature of the heated air and that of its enclosure increases, the proportion of the heat expanded in warming the walls of the shaft increases; again, the high velocity caused by the high temperature, results in a large part of the heated air being carried off before it has exerted its full potential energy.

The objection to the use of furnaces applies also similarly to the use of gas-burners for producing heated columns of air. These are likewise extravagant in the effect produced by the consumption of a given amount of fuel, with the additional drawback that the fuel is a costly one.

The application of gas-burners is, however, frequently so exceedingly convenient that its suitability in this respect outweighs the extravagance. This is particularly the case with domestic ventilation, where convenience is of high importance, where the amount of ventilation required is not usually very considerable, and where it is desirable to have the opportunity of readily increasing or decreasing the activity of the ventilating agents.

In utilising gas-burners as sources of heat for ventilation, the practice has occasionally been adopted of dividing the shaft or flue by sheet metal, on which the gas-flames are made to impinge, the idea being that the radiation from the heated metal surface would more effectively warm the air in the shaft. This practice, however, falls into a two-fold error. First, the heat of the gas is still more rapidly led to the upper part of the flue, and thereby some of its efficiency is lost; second, the increase of surface largely increases the friction of the air current, and thus a further portion of the useful energy is dissipated.

It should be hardly necessary to mention that gas-burners, when used solely for ventilation, should be "atmospheric"—that is, constructed like a Bunsen burner, to give the maximum of heat and the minimum of light, but it is also possible to utilise the heat generated by gas-burners primarily employed for lighting purposes. This particularly applies where sun-burners, or the large gaseliers used in theatres, are found. The heat that these necessarily throw out can be well adapted as an assistance to the ventilation.

We now have to consider the employment of steam or hot-water pipes for the production of heated columns of air.

The rule as to the location of the heating agent, which we have seen to obtain with furnaces, applies also in this case. Our coils of heating-pipes should be at the bottom of the shaft, so as to obtain as great a length of this latter as possible. The method that has been frequently employed of placing hot pipes in the roof or at other high levels is wrong in principle and wasteful in practice.

Further it is desirable that the coils should not block up the shaft, and they should, therefore, be placed in an enlarged chamber so that the free area shall be about 10 per cent. greater than the sectional area of the flue or shaft. At the same time, it is important that in this enlarged chamber the pipes should be distributed and arranged so that no air will pass without coming in contact with heated surfaces. The principles that have been already enunciated as to the length of the shaft should also be observed.

The most economical occasions for the use of steam or hot-water pipes for the purpose we are now considering will be those in which these means are adopted for the warming of a building. It would rarely be desirable to institute the necessary apparatus solely for the purpose of ventilation.

The determination of the amount of pipe necessary for any particular scheme of ventilation is a fairly easy matter, and a simple formula for this purpose has been arranged by Professor Trowbridge, of Columbia College, U.S.A., as follows:—

$$S = \frac{W T_a}{H (T_s - T_a)} \times 1500$$

Where S represents the number of square feet in the exterior surface of the coil or cluster of heated pipes at the base of the shaft, T_a is the *absolute* temperature of the external air, that is, the common or thermometric temperature + 459·4° Fahr. W represents the weight of air in pounds which is drawn off by the shaft in one second, H the height of the shaft, and T the *absolute* temperature of the steam or hot water in the pipes, that is, the thermometric temperature + 449·4° Fahr.

In using this formula it is advisable that the sectional area of the shaft in square feet should be 3 W, that is, three times the weight in pounds of the air to be drawn off. This then gives a satisfactory velocity of the air in the shaft of 5 ft. per second.

This formula is applicable whether the pipes contain steam at high pressure or low pressure, or hot water at either high or low pressure.

Motors.

We may close this chapter with a brief consideration of the various types of motor which may be employed to drive fans or other moving apparatus for the production of air currents.

These may be classed into steam-engines, gas-engines, electric motors, and water power.

The order in which these are here given fairly represents their relative efficiency in the utilisation of energy.

Steam engines are undoubtedly the most effective as compared with the cost of the fuel they consume, but they are frequently surpassed by gas engines in convenience, where a small amount of power for ventilation purposes is required. It is impossible to lay down a hard-and-fast rule which shall fit all circumstances, but, generally speaking, when not more than 5 horse-power is needed, gas engines will be found preferable; but, beyond this, steam engines should be used. Whenever steam is employed for warming, steam engines should certainly be adopted for the ventilation.

Electric motors are still more costly in loss of energy or work; but here, again, convenience may sometimes compensate for the loss. It is so much easier to convey power by electric current in a couple of wires than by steam pipes or gearing, that this will occasionally render it advisable to adopt this method when we desire to run a fan at a considerable distance from our central source of power.

Water-power will seldom be found advantageous in use for ventilation purposes, except where considerable heat is obtainable at very low cost. If we have to pay a water company for the water used, the expense of applying this source of power will be found prohibitive, except for very rare occasions, and we may consider it, therefore, beyond the pale of practical ventilation work.

CIVIL AND MECHANICAL ENGINEERS' SOCIETY.—In consequence of the great demand on the resources of the Holborn Restaurant, the annual dinner of this Society has to be unavoidably postponed until May 27, 1891, at 6.30 for 7 p.m., in the above building (Queen's Salon).

SURVEYORSHIPS.

LLANDUDNO.—Mr. T. T. Marks, Assoc.M.Inst.-C.E., who has been since 1876 Clerk and Engineer to the Llandudno Improvement Commissioners, has resigned those offices to enter upon private practice. A large number of the Commissioners and their townsmen on the 1st inst. entertained Mr. Marks at a farewell banquet, and presented him with an address, which recounted in flattering terms the works which Mr. Marks had carried out for the town during his fourteen or fifteen years' tenure of office. These include water-works, gas-works, sewerage, and town improvements. The address was accompanied by a purse containing the sum of 130*l.*, and by other presents. From the reports of the speeches made on the occasion, and from the enumeration of his works, Mr. Marks appears to have done a great deal for Llandudno, and to have well merited the thanks of its townsmen.

SOUTH SHIELDS.—The Town Improvement and Sanitary Committee of the South Shields Town Council have recommended the Council to increase the salary of the Borough Surveyor (Mr. Matthew Hall) from £400 to £450 per annum.

GENERAL BUILDING NEWS.

LIVERPOOL GENERAL POST OFFICE.—It is believed that Parliament will shortly vote the necessary funds for the site of a new General Post Office, which the increase of business in Liverpool has made necessary. A site in Victoria-street, about equidistant from the three principal railway stations, is spoken of as the probable one. The Liverpool Post Office has been for many years housed in a portion of the Custom-house buildings, which is now said to be quite inadequate for its double duty.

SCHOOLS, DONCASTER.—A new school-room in connexion with the Marsh-gate Mission Church, Doncaster, has just been completed. The new school is in Cheswold-street, and is connected by a passage with the playground at the back of the church. The site of the new school and the playground have both been given by Alderman Elwis. The contract for the school-room was let to Mr. W. Johnson for 657*l.*, and the plans were supplied by Mr. Herbert Athron. The building is 55 ft. long and 18 ft. wide, and has accommodation on one floor for 123 children. The Domestic Gothic style of architecture has been adopted, the facing being of pressed brickwork with stone dressing, and the roof being covered with green Westmoreland slates. The internal wood-work is of pitch-pine, with wood block flooring on asphalt concrete.

NEW WESLEYAN CHURCH, NORTH SHIELDS.—On the 26th ult., a new Wesleyan Methodist Memorial Church was opened for divine service at North Shields. The church has been erected in memory of a daughter of the late Mr. J. Robinson, of North Shields. The plan is cruciform, and consists of a nave and aisles, a transept on each side, and an orchestra separated from the body of the church by a stone arch; the extreme length inside is 93 ft., and the width across transepts 43 ft. It has galleries carried round three sides. The central part or nave is separated from the aisles by arcades of timber arches, carried on metal columns, which are of two tiers; the lower ones carry the rolled-iron girders supporting the gallery joists, and the upper ones the rolled girders on which the roof is placed. The ornamentation of the caps of columns is all of iron. The construction has been carried out in iron and wood, and all wood spandrils of arches are pierced with tracery work. To prevent any lateral thrust from the roof, wrought-iron tie-rods and king-rods are used, and relieved with moulded ironwork. The main entrance is by two moulded arched doorways in the south gable; inside these is an outer lobby, a door on either side communicating with inner lobbies, from which the interior of the ground-floor is reached—while from these inner lobbies access is obtained to the east and west staircases to the galleries. All these doors open outwards. The gallery staircases have separate exits by doors on their east and west sides. All the lobbies are laid with Minton's tesselated tiles, and the screens and door panels are filled with ornamental lead-glazing. At the north end of the building, under the orchestra, is the minister's vestry, and on the east side of this are two vestries, one over the other, with the heating-chamber in the basement. Attached to these are lavatories and retiring-rooms. Separate access to the orchestra is obtained by a staircase on each side. In a yard in the rear are outbuildings. The whole of the seats and the gallery-front are of Canadian oak, with Orham (a Canadian ash) panels. A pulpit has been dispensed with, and a platform substituted, with a central desk for the officiating minister. The tower, which contains the west gallery staircases, is 73 ft. high, with a stone spirelet. Four of Honeyman's ventilators have been inserted in the roof of the building. The main south gable is pierced for four lancet lights, divided by red sandstone shafts with carved foliage caps, with three orders of moulded arches. The work has been carried out by Messrs. J. & W. Simpson, of North Shields. The heating apparatus has been supplied by Messrs. Dinning & Cooke, of Newcastle. Memorial windows, erected by the Messrs. Robinson to commemorate their late father and mother, have been placed in the six ground-floor windows of the west transept, forming two groups of three windows. Each window has a canopy in colours, with central panels containing the subjects. The windows have come from the studio of Mr. R. J. Newberry, of London. Mr. F. R. N. Haswell, F.R.I.B.A., has designed and carried out the work at the church.

BAPTIST CHAPEL, RODLEY.—On the 2nd inst. six memorial-stones were laid of a new Baptist chapel at Rodley, Yorkshire. The building is in the Classic style of architecture, freely treated, and is being built on a site fronting the Shipley and Bramley main road. The architect is Mr. J. P. Kay, of Leeds. The building will cost about 1,700*l.*, and will accommodate 300 persons.

WESLEYAN MISSION-ROOM, HUNSLET.—On the 2nd inst. memorial-stones of a new Wesleyan Mission-room, with class-rooms and caretaker's house adjoining, were laid at Hunslet, Yorkshire. The buildings are being erected from the designs of Mr. George F. Danby, architect, Leeds, upon a site situated in Church-street and Milner-grove, Hunslet. There will be a mission-room (entered by a lobby from Church-street) 31 ft. wide and 54 ft. long, which will accommodate 300 adults. Class-rooms of various sizes will be arranged on either side, giving further accommodation for 115, exclusive of another room 21 ft. by 16 ft. The main room will be lighted by three windows at each end and dormer windows in the roof. The buildings will be built of brick, with Harehills stone dressings, and the roof will be covered with Bangor slates. The internal woodwork will be of pitch-pine, varnished. Some of the windows will be glazed with tinted leaded lights, and the class-room windows will be glazed with rough plate-glass. The room will be ventilated by means of gratings in the ceilings, connected with Stevens's exhaust ventilators. The cost of the buildings, exclusive of warming and furnishing, will be about 1,325*l.* The contractors are Messrs. Hutchinson, Joseph James, J. W. Richmond, James Cockerill, jun., William Pennington, and Alfred Welham.

BATHS, BURSLEM.—On the 6th inst. the Town Council of the Borough of Burslem instructed their surveyor, Mr. F. Bettany, to prepare plans for public baths on a site which has been presented to the town by Messrs. Woods.

LYCH-GATE, EMBERTON, BUCKS.—A lych-gate has been erected at the north-east entrance to the churchyard. It is of English oak, richly moulded, and resting on walls of Weldon stone, with Ketton stone dressings, and internal seats of York stone. The roof is covered with selected old tiles, and surmounted with a cross of iron and copper. The woodwork has been done by Mr. Wilford, of Newport Pagnell; the stonework by Mr. Mansfield, and the smith's work by Mr. E. Downing (both of Stony Stratford), from the designs and under the supervision of Mr. E. Swinfen Harris, architect.

NEW BATHS, SALTBURN.—On the 11th inst. Mr. Arthur Pease opened some new brine baths at Saltburn-by-the-Sea, Yorkshire. The building in which the baths are contained has a frontage, facing the railway station, of 80 ft., a depth of 130 ft., and covers an area of 1,155 square yards. In the centre of the building is the swimming-bath, surrounded by the various medicinal and curative baths and other offices. There are two principal entrances, one for ladies and the other for gentlemen, with offices between. Opposite the entrance is the swimming-bath, which comprises an enclosure 83 ft. long by 43 ft. wide, the bath itself being 75 ft. long by 30 ft. wide, and having a depth varying from 3 ft. at one end to 7 ft. at the other. This will be supplied with sea water pumped directly from the sea by means of special pumping-engines fixed near the sea level, the water being kept at a tepid temperature by steam-pipes carried along the bottom of the bath. Along one side of the bath are the dressing-rooms, twenty-one in number, with a balcony above for spectators, the building being covered by a glazed roof with pitch pine principals. Around the building there passes a corridor which gives access to the various sulphur and other baths, there being a complete and distinct set on each side of the building. Passing along the corridor to the right, which is the gentlemen's side, the first apartment is a waiting-room, adjoining which are attendants' rooms, massage-rooms, fresh-water bath-rooms, and the brine bath-rooms, with separate dressing apartments. At the back of the building are situate the douche-rooms. The arrangements on the other side of the building,—set apart for ladies,—are exactly similar. At the back of the building is situate the engine and boiler-house, with Cornish boiler for supplying steam for heating purposes. The building is of red pressed brick with terra-cotta ornaments, the interior woodwork being of pitch pine. The tower adjoining the principal entrance is fitted with tanks for storing the sea-water and brine, the latter being conveyed by rail in specially-constructed tank waggons from the brine wells at Middlesbrough. The builders' and joiners' work has been carried out by Messrs. W. & R. Blackett, of Bishop Auckland, and the engineering work and the construction of the baths by Messrs. T. Bradford & Co., Manchester. Mr. A. F. Griffiths, was the architect, assisted by Mr. Duncan, of Middlesbrough. The total cost of the establishment, including the site, has been 5,000*l.*

RESTORATION OF ST. GERMOE CHURCH.—St. Germoe Church, near Marazion, Cornwall, has just been reopened after restoration. The church had fallen into almost a ruin, and it was found necessary to rebuild nearly the whole of it. The walls have been rebuilt on the old lines, and the stones as far as possible have been replaced in their original positions. The whole church has been re-roofed with old English oak, a low carved oak screen separates the nave from the chancel, and an oak screen separates the south transept (which will be used as a vestry) from the nave. The floor has been paved with Bridgwater tiles, and the choir stalls are of carved oak. The Rev. Ernest Geldart was the architect, and Mr. James Julian, of Truro, was the contractor. The cost has been nearly 2,000*l.*

NEW R.C. CHURCH, HULL.—On Tuesday last, the new R.C. Church of St. Mary's, in Wilton-street, Hull, was opened. The church is Early English in style, freely treated; and consists of a nave 65 ft. in length by 22 ft. wide, with north and south aisles 10 ft. wide, and at the end of each is a side chapel. Each chapel has a rose window, filled with stained glass, carved stone altars with polished Irish marble columns, and a tiled reredos, and the floors are of encaustic tiles, with polished red marble steps. The sanctuary has a circular apse, and is divided from the nave by an arch resting on clusters of polished red marble shafts, with carved capitals of Early English pattern, and moulded bands and bases. The arches which separate the sanctuary from the side chapel are filled in with traceried oak screens. The nave is divided on either side from the aisles by an arcade of four bays, with moulded arches and labels on stone columns, the shafts of which are composed of blue Normanton stone. In the spandrils of the arches are circular panels, with angels in attitudes of devotion, and above the arcade is the clearstory, which is lighted by lancet-shaped windows. The roof timbers are of pitch-pine, and are divided into bays by moulded principals raised on carved stone rafters. Inside, the rafters are boarded with Soderhamn boards, and divided into panels by moulded ribs. The floor is laid with Mr. Roger Lowe's patent wood-block pavement in herring-bone pattern. The sanctuary is laid in encaustic tiles, the predella being of polished red marble. The altar-rails are of Ancaster stone, with a polished alabaster coping, and the gates of wrought-iron and polished brass. The pulpit and the font have been erected in carved Ancaster stone, with Irish green marble columns. The two stone doorways at the west end are under a deeply-recessed moulded brick arch, in the centre of which is a representation of Our Lord crowned with thorns, and on either side spandrils of carved Early English foliage. Over this arch is a crocketted gable, in the apex of which is a carved niche with the Madonna and Child. Above this rises a recessed triple window with stone columns and carved corbels. The church is seated with open pitch-pine benches, with kneeling boards attached. The choir stalls are of oak enriched with carved figures. There are two confessionals made of yellow pine, with pitch-pine panels, and a large working sacristy, with a glass conservatory corridor leading from the presbytery. The six sanctuary windows are filled with stained glass by Mr. Alfred Hemming, of London, and the west window with Grisaille glass. The rest are glazed with cathedral tinted glass in quarries. The church, which is heated by hot water on the high pressure system, will accommodate 500 adults. The contractors are Messrs. Colley & Levitt, bricklayers; Mr. Councillor Scott, joiner; Mr. Peers, Mason; and Mr. Beal, plumber and glazier. Mr. Seal, of London, executed the stone carving, and Mr. Frith, of Hull, the pulpit, the font, and the side altars. Messrs. King & Co. had the fitting of the hot-water apparatus. The architects were Messrs. Smith & Brodrick, and Mr. Arthur Lowther.

NEW R.C. CHURCH, LEEDS.—On the 30th ult., the new church of St. Patrick, Quarry-hill, Leeds, was formally opened. The church stands on ground acquired at a cost of 3,000*l.*, at the top of Quarry-hill, near to Marsh-lane. The cost of the building, which has been constructed from plans prepared by Messrs. Kelly & Birchall, of Leeds, is about 7,000*l.* The style of the building is Decorated Gothic, and the material is brick with stone dressings. The church consists of a nave, 31 ft. wide by 118 ft. long, and has double aisles on both north and south sides, with two ranges of arcades, giving a clear width of 72 ft. The principal aisles are arranged with chapels and confessionals alternately. The sanctuary at the west end is of the same width as the nave, and has an apsidal end. At the north side of the sanctuary is the Lady Chapel, with screened arches; and on the south side is the organ chapel and clerestories for chapel and choir. The nave is divided into five spaces, each having a double, three-lighted clerestory window, with geometrical traceried stone heads. On both north and south sides there are two high, three-light traceried windows. The roofs are of dressed timber, with moulded cornices. The walls are of pressed brick, with moulded cornices, the surface being relieved

with brick panelling. The arches of the nave are supported by stone pillars, with moulded caps and bases. The floors are of wood-block paving, and the seats of pitch pine. The principal contractors have been Messrs. Barber, Leeds, for the stone-work; Messrs. Taylor, Yeadon, for the joinery; and Mr. Calloway, Bradford, for the plastering.

NEW SCHOOLS, DARNALL, SHEFFIELD.—On the 9th inst. the foundation-stone of the new Church schools at Darnall, Sheffield, was laid by Mrs. E. W. Stanyforth. The new schools will be in a two-story building of stone, in the Gothic style, with the various rooms arranged for Sunday school purposes, as well as for parish meetings, &c. Accommodation for day schools is provided for 240 boys, 240 girls, and 212 infants. Block flooring will be provided, and movable partitions will be placed between the school-room and the class-room. The ventilation has, it is said, had special attention. Messrs. George Longden & Son are the contractors, their contract being 3,902*l.*, and the architect is Mr. C. J. Innocent, of Sheffield.

WORKS AT MANCHESTER CATHEDRAL.—We are informed on authority that the cost of the temporary repairs only to the roof of the choir of the Cathedral is estimated at over 300*l.* This is simply to clear the building from the risk and danger which, in the judgment of Mr. Crowther, the architect, was imminent. The immediate outlay has received the sanction of the Bishop, but it will very shortly be necessary to take into consideration further expenditure for the complete repair of this portion of the fabric. These repairs will be carried out strictly on the lines of the present construction, and Mr. Crowther has furnished the Chapter with a report both on the construction and condition of the choir roof, which has been for a considerable time in a somewhat critical state.—*Manchester Courier.*

MASONIC HALL, KINGSBRIDGE, DEVON. — The dedication of a new masonic hall, situate in Duncombe-street, Kingsbridge, Devonshire, took place recently. The inside measurement of the hall is 30 ft. by 20 ft. The angles are ornamented with Tuscan columns, carrying heavily-moulded cornices, from which spring curved and moulded ribs dividing the ceiling into sixteen panels. It is fitted with a Doric Bath stone chimney-piece and with pitch pine seating. Mr. George Hooper was the builder, and Mr. E. Watson was the architect.

NEW R. C. CHURCH, CARLISLE.—The plans of Messrs. Dunn, Hansom, & Dunn, of Newcastle-upon-Tyne, for the erection of a new Roman Catholic Church on the Warwick-road, Carlisle, have just been passed by the Carlisle Health Committee. The plans show that the building will be set back from the road to the extent of about 30 ft. It will cover an area of about 900 square ft., and consist of a nave, two aisles, two chapels, two sacristies, entrance porch, tower, and baptistry. The tower is at the west end, and is surmounted by a flag turret. The east window is of rose design with an entablature and four statues of saints below. The building will be of red stone, and the windows of plated glass. The roof will be slated; and in the interior of the church on each side of the nave there will be Gothic arches with columns, and the whole building will be in the Gothic style.

SANITARY AND ENGINEERING NEWS.

THE LONDON WATER SUPPLY BILLS.—The Hybrid Committee of the House of Commons upon the various London Water Supply Bills of this session, having taken further evidence in support of the Water Trust scheme promoted by the Vestries, have interrupted their execution of that Bill in order to take up that introduced by the Southwark and Vauxhall Waterworks Co. Before doing this, however, they took evidence from Mr. Grover, C.E., engineer of the Rickmansworth and Leatherhead Waterworks. This witness explained that the present supply of water for London was derived by the eight companies partly from springs and partly from flowing rivers, the springs being chiefly those of Kent, and the rivers being the Thames and the Lea. The population actually supplied was 5,581,491, and the number of houses was 752,555. The supply amounted on an average to 167,000,000 gallons a day, but on some occasions it had risen to 196,000,000 gallons a day. The Thames contributed 85,000,000 gallons, the Lea 58¼ millions, and springs and wells 23¾ millions. From the Kent springs he thought some further supply could be obtained, but not much more from the Kent wells, which varied in depth down to 300 ft., and from which 17,000,000 gallons a day were being drawn. With regard to the Lea nothing more could be taken from the running river, but he understood that wells were being sought in the Lea Valley, and with some success. The maximum draft of the Thames to all the companies was 100,000,000 gallons, and, in his opinion, they ought not to be allowed to draw more than that quantity. Very little more water could be obtained from the present sources for London, and it had been manifest for the last ten years that additional sources were urgently needed. At Leatherhead the supply from the chalk was far greater than was required, and he believed that, by sinking in the valley between Leatherhead and Dorking, very nearly 10,000,000 gallons a day might be safely relied on with the present pumping-stations and two or three additional ones. And at Rickmansworth he believed they might safely depend on getting 20,000,000 gallons a day, not at the stations only, but from various points along the valley. The Leatherhead and Rickmansworth undertakings being adjacent to London, and an additional supply being necessary, they were the natural sources, and the only sources at present. Mr. Grover also stated that, at the present rate of increase, the population of London in 1891 would probably be found to amount to nearly 7,000,000, and that would require 45,000,000 gallons of water per day than was at present provided.

ALMONDSBURY WATER-WORKS.—The water-works at Almondsbury, Gloucestershire, which have been in course of erection for some time past, have just been opened. The water is supplied by means of a windmill, situated about a quarter of a mile from Almondsbury, at the base of which is a well 24 feet deep. The water is forced from this well by a Simplex wind engine, and also a double-action pump, through a main-pipe 3 in. in diameter, leading to a reservoir, situated at the brow of the hill. From this reservoir, which will hold 4,000 gallons, two supply-pipes are fixed, one leading down the hill by the post-office, and the other extending along the brow of the hill. At the end of these supply-pipes will be a fountain by Beck & Co., of London, at which the parishioners will obtain the water. The work has been carried out by Mr. John Wallis Titts, of Warminster.

NEW RESERVOIR, BURY, LANCASHIRE.—On the 7th inst. Mr. Alderman Peers, of Bury, cut the first sod of a new reservoir to be constructed by the Bury Corporation at Clough Bottom, near Newchurch-in-Rossendale. The gathering-ground is 736 acres, the surface of the reservoir 32 acres, the maximum depth 76 ft., with a capacity for two hundred thousand million gallons.

DRAINAGE AND SEWAGE WORKS, DODWORTH, YORKSHIRE.—On the 8th inst. Colonel W. M. Ducat, R.E., an Inspector of the Local Government Board, held an inquiry at Dodworth into an application of the Dodworth Local Board to borrow 5,000*l.* for works of drainage and sewage disposal. Mr. Gibson, the clerk, explained that the district had not hitherto had any proper system of drainage, but the sewage from the houses in the district had been conducted into the dyke which runs along the north side of the village and through Dodworth Bottom. The inefficiency of the present method had long been realised, and the Board had been anxious to remedy the defects and prevent the pollution of the dyke at the earliest possible moment. Inspectors of the Local Government Board had also called attention to the matter, and the Board had refused to sanction any scheme of sewerage which did not provide for the purification of the sewage before any portion of it was allowed to enter the stream.—Mr. John Wade, surveyor, Barnsley, explained the system which the Board on his recommendation had adopted. The town would be properly drained, the surface water being taken out of the sewers, and the sewage would be treated on seven acres of land which the Board had acquired. — After hearing the evidence, Colonel Ducat visited the site of the proposed works.

SEWAGE WORKS, RAINHILL, LANCASHIRE.—On the 30th ult., at the Rainhill National Schools, Major Phipps Carey, R.E., held an inquiry on behalf of the Local Government Board with respect to an application by the Prescot Union Rural Sanitary Authority for power to borrow 1,500*l.* for works of sewerage in Rainhill. Mr. S. H. Hartley conducted the Sanitary Authority's case, and said the proposed scheme was the completion of that of 1875, which, if adopted, would complete the sewerage of the township. Mr. Oppenheim said the Widnes Local Board did not oppose the scheme, but the sewage farm was a great cause of complaint.

FOREIGN AND COLONIAL.

FRANCE.—There is some talk of demolishing, to replace it by a business building, the celebrated Pompeian house in the Avenue Montaigne, built under the Second Empire by M. Normand, and which belonged to Prince Napoléon.——There is also talk of a competition for the building of a new Salle des Séances for the Chamber of Deputies, and of additional salons at the Palais Bourbon. The total expenditure proposed is 2,000,000 francs, with a first premium of 12,000 and a second of 4,000 francs.——The design prepared by M. Guillotin for the rebuilding of the Opéra Comique has just been laid before the Minister of Public Works, who, after taking the opinion on it of the "Comité des Bâtiments Civils," will submit it shortly to the Chambers.——The Champs de Mars Salon was announced to open on the 15th (yesterday).——M. Claude Monnet, the painter, has organised at the Durand Ruel Gallery an interesting collection of his works, which will be open till the 20th of this month.——The widow of a rich collector has left to the museum of the Society of Antiquaries of Normandy a triptych in Limoges enamel of great value, dating from the sixteenth century. The centre panel represents the Adoration of the Shepherds, the two others the Annunciation and the Salutation of the Angel.——The Bishops of Rodez, St. Flour, and Viviers have taken the initiative for the erection of a colossal statue of the Virgin on the hill of Fontaneilles, situated on the confines of Rouergue and Gévaudan.——The Minister of Public Works opened last week the railway from Champagnole to Lons-le-Saulnier.——At Avignon the centenary celebration of the annexation of the county of Vénaissin to France has been commenced, and the fêtes will last to the end of May, when there will be inaugurated, on the Place de la République, the commemorative monument intended to replace the statue of Crillon which has been moved to the Place de Château des Papes.——M. S. H. Berthoud, a man of letters recently deceased, has left a splendid collection of works of art to Douai, his native town.——A subscription has been set on foot among the revolutionary clubs in Paris for the purpose of erecting a monument to the victims of the recent collision with the authorities at Fourmies.——There have been discovered at Avallon (Yonne), on the Côte-des-Chaux hill, the remains of a Roman house which is supposed to have been an advanced post of a Roman camp. A number of objects were found, such as pieces of amphoræ, cups, arrow-heads, &c.——On the occasion of the anniversary of the 1889 Exhibition, M. Dutert, the architect of the Palais des Machines, has been fêted at his native town of Douai. He was received at the railway-station by the representatives of the Municipality, and conducted to the Hôtel de Ville, where he was offered a "vin d'honneur" as well as the gold insignia of the Legion of Honour. This kind of honour to an architect deserves notice as being a somewhat rare incident.——The death is announced of M. Joseph Antoine Gardet, a sculptor of much talent, who obtained a second medal in 1888 for a bas-relief entitled "Le Drapeau," which was purchased by the Municipality of Paris. The present Salon has his latest work, a group in marble representing "Le Sommeil de l'Enfant Jésus."——The ex-Empress Eugénie has built a château on the promontory of the Cap Martin, near Mentone. ——M. Larroumet, the Directeur des Beaux-Arts, has been classed in the first line among the candidates who present themselves for the place left vacant at the Académie des Beaux-Arts by the death of Prince Napoléon. M. Lafenestre is in the second line. The election takes place to-day (Saturday).

HAMBURG.—The new block of Municipal Buildings, the so-called new "Rathhaus," now in course of erection, is progressing gradually, and it is hoped that the roof will be on next year. 6,750,000 marks have been voted to cover the costs of the building, 700,000 marks are to be voted for the sculpture on the façades, so that, when complete with internal fittings and furniture, the total is likely to reach 1,000,000 marks, or nearly £50,000. We hear that no fewer than twenty emperors and six nobles are to be commemorated by statues in the façade, besides some twenty-four allegorical figures.

KONIGSBERG.—The University here, thanks to unbounded liberality of an old student, now resident at New York, will be the first German University to have some institution in connexion with it, in which bodily exercise and mental recreation can be had. An extensive block of buildings, including a club-house on a grand scale, a riding-school, swimming-baths, a gymnasium, and a school of arms, is to be erected here. The preliminary competition for designs has already taken place.

RUSSIA.—The French Arts and Crafts Exhibition at Moscow, the idea of which was so very popular on account of political reasons, seems to have been a false step from the mercantile point of view, at least for Russia, as the Moscow merchants seem to have already found out, to their cost, that they will in future have an exceedingly stiff French competition to deal with, and are bitterly complaining.——Referring to the proposed railway across Siberia, a technical paper informs us that the two schemes (see December 27, 1890) advocated are being worked out, but that up to the present it is not settled which of the two will be taken in hand. The cost of the direct route from Tjumek, in the Urals, to Vladivostock, on the Pacific coast, 8,000 versts long, is estimated at 340 millions of roubles. The cost of the indirect route, from Tomsk to Vladivostock, in which a combination of short railways with the great waterways of the country is recommended, which line could, however, only be open one-third of the year owing to the rivers Obi and Irtysk being frozen over, is estimated at 120 million roubles. Whichever route be taken, a railroad to the Pacific coast will be of great strategic and also commercial importance to Russia.——From an official report just issued by the Russian Minister of Communications, we learn that the working of the Russian railway last year was satisfactory. The length of the private lines was 19,231 versts, and that of the state lines 8,007 versts, making a total of 27,238 versts (3 versts=2 miles).

There has been a steady increase of both passengers and goods traffic during the last quinquennial period. The earnings of the private railways decreased last year by 2 per cent., but those of the State increased by nearly 4 per cent. On the new great line into Central Asia the receipts even increased by 22 per cent. in the period 1885-1890.

NORWAY. — The buildings designed by Herr Munthe for the German Emperor, in Norse style, to be erected in Silesia and at Potsdam, and to which we have previously referred, will be executed and put together by Herr E. Olsen, builder, of Frederickstad, and then taken to pieces for subsequent re-erection at the places of destination.——The committee charged with considering the designs for a new theatre in Christiania has accepted those of Herr Henrik Bull, a well-known architect, and they have now been on view to the public. The cost of the building is estimated at about 40,000*l.*, and the interior fittings, with warming and electric-light installations, at 20,000*l.*——The Eastern Railway Station, in Christiania, is to be greatly enlarged, but this year only some 2,500*l.* are to be expended on the work.——It is proposed to pull down the old Palace, a former Royal residence in the capital, and use the site for the erection of some public building, possibly a new custom-house.——The municipality of Christiania has adopted plans for the erection of a large central electric lighting station, the site to cost 5,000*l.*, and the building and works 23,000*l.*——A series of stringent regulations respecting scaffoldings, &c., in the capital, have been issued by the authorities.——A new central post-office is to be built in the town of Bergen, at a cost of 12,000*l.*, the designs accepted being those of Herr Dybwad.——An important work to Norwegian architects and builders will shortly be issued, viz., "Handbook of Architecture," by Edvard Kolderup, engineer, and two prominent architects,—Herrer Trap-Meyer & Ebbell. There does not exist a single work in Norwegian on architecture and building, those used by architects being principally German.——The Storthing has a scheme under consideration for the improvement and protection of the important port of Bodö, on the north-west coast, at a cost of 34,000*l.*

MISCELLANEOUS.

THE INCORPORATED ASSOCIATION OF MUNICIPAL AND COUNTY ENGINEERS.—A Midland Counties District meeting of this Association is to be held at Stourbridge on Saturday next, the 23rd inst., when the following papers will be read:—(1) "On the Sewage Disposal Works of the Stourbridge Main Drainage Board," by Mr. W. Fiddian, F.S.I.; (2) "On the Market Harborough, Great and Little Bowden Waterworks," by Mr. H. G. Coales, Assoc. M. Inst. C.E. Afterwards, the party will leave in brakes for a visit to the glass-works of Messrs. Thomas Webb & Sons. They will then visit the sewage pumping-station and the sewage-farm at Whittington, subsequently returning to the Town-hall for the discussion of the papers.

LECTURES AND DEMONSTRATIONS FOR SANITARY OFFICERS AND OTHERS.—We are informed that the County Council of Staffordshire, having observed the great advantage arising from the periodical courses of instruction given by the Sanitary Institute to sanitary officers, have asked the Council of that Institute to co-operate with them in organising similar lectures in the county of Stafford. Accordingly a list of lectures has been arranged for the special instruction of those desirous of obtaining knowledge of the duties of sanitary officers. The County Council very laudably undertake to pay the travelling expenses of all Inspectors holding office in the administrative county of Stafford who enter for the examination to be held in Stafford by the Sanitary Institute at the end of the course. The first of the twelve lectures arranged for was to be given on Wednesday last in the Shire Hall, Stafford, by Sir Douglas Galton. Among the lecturers is Mr. P. Gordon Smith, the Architect to the Local Government Board, who will lecture on "Sanitary Building Construction" on the 27th inst.

THE FINNISH IRON AND STEEL INDUSTRY.—From the annual report, just issued, of the Finnish iron and steel industry, we learn that the ores used in the same are derived wholly from lakes and bogs, *i.e.*, so-called "lake" and "bog" ore, having but small contents of iron. Of these kinds of ore 35,000 tons were raised. There is only one small iron mine being worked, the balance of ore required being imported from Russia. We further learn there were fifteen furnaces in blast in Finland, producing 9,500 tons of pig-iron, valued at 65,000*l.*; whilst the manufacture of bar iron amounted to 3,400 tons, valued at 30,000*l.*; and that of plates, rods, angles, and mill bars to 6,700 tons, valued at 63,500*l.* The make of steel in ingots was 1,350 tons, valued at 15,200*l.*; of iron and steel goods, 2,500 tons, valued at 36,500*l.*; of cast-iron and steel ware, 4,200 tons, valued at 38,000*l.* Owing to the non-working of the largest Finnish iron and steel works, which in the preceding year produced some 3,500 tons, there is a falling-off in the output of iron and steel in Finland amounting to 2,600 tons. The number of men and women employed in these industries is 17,534. The value of the fuel used in the manufacture is estimated at 24,000*l.*, whilst the entire metallurgical production of Finland is valued at 645,000*l.*, being an increase upon the preceding year of about 50,000*l.*, or 9½ per cent. Naturally, most of the Finnish iron and steel goes to Russia, but by a ukase passed some five years ago the imports are limited, whilst duties are imposed on certain kinds of iron which has entirely crippled this flourishing trade. Since this law came into force the total imports and limits have been as follows:—Pig-iron and blooms, 110,000 tons (limit 120,000 tons); bars, 103,700 tons (limit, 120,000 tons); manufactured iron and steel goods, 10,640 tons (limit 21,000 tons); machinery, tools, &c., 1,500 tons (limit, 18,000 tons).

THE RUSSIAN METAL INDUSTRIES.—From an official report just published on the Russian metal industries in 1888, we learn that iron ore was raised from 612 mines and 149 lakes to the amount of 1,380,000 tons, as against 1,305,000 tons in 1887. Pig-iron was produced at 132 foundries, the output being 610,000 tons, of which 400,000 tons were produced in the Ural. The increase of make since 1887 is 52,000 tons, or about 9 per cent. In the decennial period 1879-88 the manufacture of pig-iron has increased 54 per cent., or 230,000 tons. Bar-iron was manufactured in 1888 at 173 works, the make being 350,000 tons, as against 345,000 tons in 1887. In the period 1879-88 the make of bar-iron has increased by 80,000 tons. The number of steel works in Russia in 1888 was thirty-two, which turned out 210,000 tons, as against 205,000 tons in 1887. Of late years Russia has gradually been increasing her duties on iron and steel, with such success, according to this report, that at present hardly 10 per cent. of the country's requirements are taken from abroad.

MOSAIC PAVING.—Mr. Batsford announces the publication shortly of a collection of rubbings of floors at Pompeii and Venice, with additional patterns from Rome and Palermo, by Mr. Arthur T. Bolton, A.R.I.B.A. The work will consist of thirteen plates, including the title-page and two of full-sized details; the remaining ten plates being reduced to half full-size, from tracings of the original rubbings made in Italy, of the best examples of old mosaic pavements.

INDIAN PHOTOGRAPHS. — We have received Volume I. of a collection of small but very good photographs of buildings of interest in India, reproduced by the Autotype company from photographs by Lala Deen Dayal, with descriptive notes by Lieut.-Col. Cole, R.E. The first book comprises buildings in Delhi and Agra. It is a little book, but the series when carried out will make an interesting collection of Indian illustrations.

LIVERPOOL ENGINEERING SOCIETY.—The annual general meeting of this Society was held at the Royal Institution, Colquitt-street, Liverpool, on the 6th inst. Mr. Ferdinand Hudleston, Assoc.-M. Inst. C.E., President, took the chair, in the presence of a large number of the members. The following officers and members of the Council were elected for the forthcoming session, viz.:—President: Mr. John T. Wood. Vice-Presidents: Mr. H. P. Boulnois, M. Inst. C.E., and Mr. R. E. Johnston, M. Inst. C.E. Council: Messrs. Blair, Cottrell, Farren, Miller, Mills, Morgan, Potts, and Sang. Hon. Secretary: Mr. J. H. T. Turner. Hon. Treasurer: Mr. O. S. Pilkington. Hon. Librarian: Mr. J. A. Brodie. The remainder of the evening was taken up by the adjourned discussion upon a paper read by Mr. George Farren, Assoc. Inst. C.E., at the previous meeting, entitled "Denudations at Aber-Menai, Anglesey."

ROLLERS FOR GRANOLITHIC PAVEMENTS.—Mr. Alexander Gilchrist, brassfounder, Glasgow, sends us some particulars of his brass rollers and mountings for granolithic pavements. These pavements are composed of chips of granite and cement, are laid out in a semi-liquid state, in which condition they are indented by means of these brass rollers, in order to present a good foothold. Mr. Gilchrist has invented a method of making the rollers and teeth all in one piece, which he claims is a distinct advantage over the old method, whereby the teeth were constantly dropping out and needing to be replaced. Rollers of other kinds, for making corrugations or grooves in stable or other floors, are also made by Mr. Gilchrist.

NEW BELLS FOR ST. SIDWELL'S, EXETER.—Messrs. Mears & Stainbank, of Whitechapel-road, London, have received instructions to cast two new bells to fill the vacant "cages" in St. Sidwell's Church-tower, to make the peal of ten complete. Mr. Harry Stokes, of Woodbury, will do the necessary hanging. The work is to be all complete by June 13. So long ago as 1773, Messrs. Mears & Stainbank recast the eight bells at present in the tower. The work of erection will be carried out under the direction of Mr. Ed. Ashworth, architect, Exeter.

ALTAR FRONTALS.—The Decorative Needlework Society, 17, Sloane-street, have just completed two altar frontals, which are on view for two or three days. We are asked to say that the Society has always much pleasure in showing work of this kind to those who are interested in it.

THE LATE MR. VERITY.—We are asked to state that Mr. Hunt was not at any time, as we supposed, in actual partnership with Mr. Verity. They were collaborators in various buildings and competitions, in connexion with which the names of the architects appeared as "Messrs. Verity & Hunt," but they were never in any permanent partnership.

FAWCETT'S FIREPROOF AND VENTILATING FLOOR.—We are informed that a syndicate is being formed for the purpose of developing the United States patent for this floor. The capital of the syndicate is to be 2,000*l.*, in 100 shares of 20*l.* each; no one member of the syndicate to hold more than five shares.

REMOVAL.—Messrs. Szerelmey & Co., manufacturers of the well-known stone-waterproofing liquids and iron paints which bear their name, have removed their counting-house to Faraday House, Charing-cross-road.

LEGAL.

ROAD-SCRAPINGS FOR "MORTAR."

AT the Second Court of the Sheffield Town Hall, on the 7th inst., before Mr. Frank Mappin and Alderman W. J. Clegg, Alfred Margerison was summoned with regard to four houses he is erecting in Vincent-road, the charge being that he did not use "good mortar compounded of good lime with clean sharp sand, or other suitable material; or with good cement; or good cement mixed with clean sharp sand."

Mr. H. Sayer, the Deputy Town Clerk, who appeared for the prosecution, explained that the charge was under the building by-laws of the Corporation, and this was the first case under the by-laws with regard to mortar, which must be of the quality mentioned in the summons. An inspector found that the defendant was using road-scrapings as mortar for the foundations, and some of the superstructure of the four houses he was building in Vincent-road, Sharrow-lane, and this, it was contended by the prosecution, was not suitable material.

Mr. Fairclough, District Building Inspector, said he visited Vincent-road on March 5, and saw that the defendant had four houses in course of erection. On a mortar board he found a small quantity of lime mortar, but on pulling down part of the foundation stones he discovered that nothing but road scrapings had been used. At one part of the foundation wall there was a quantity of horse manure. He took samples to dry for the purpose of analysing, but the smell arising from the material as it became warm was so bad that he was obliged to throw it away. He afterwards learned that some of the material had been taken from gulley grates.

Defendant admitted the offence. He said many other people used the same stuff, and were not prosecuted, whilst he, who had only had two or three loads was summoned.

Mr. Mappin said the Inspector had to throw the stuff away, it smelt so when being dried.

Defendant said he believed it would smell when warm.

Mr. Mappin said the magistrates considered the case to be a very bad one, but as it was the first prosecution under the by-law, a fine of 3*l.*, and costs 2s., would only be imposed.

Defendant, as he left the box, said "I shall build no more after this lot."—*Sheffield Evening Telegraph.*

CAPITAL AND LABOUR.

THREATENED GENERAL LOCK-OUT OF LONDON CARPENTERS AND JOINERS.—At a large and influential meeting of the builders of London, held at the Westminster Palace Hotel on Monday last, at which nearly all the leading firms were represented, it was resolved, with but one dissentient:—"That this meeting, representing the largest employers in the building trade of London, being of opinion that the demands made by the carpenters and joiners are unreasonable, authorises the Committee of the Central Association of Master Builders of London to give notice to the United Trades Committee of Carpenters and Joiners that unless the firms struck against are enabled to obtain sufficient men to meet their requirements by the 23rd day of May, 1891, the only course open will be to close all shops and works against carpenters and joiners, and this meeting pledges itself to do so."

THE BUILDING TRADE IN WELLINGBOROUGH.—The *Northampton Mercury* reports the results of a meeting of the representatives of the master builders and the bricklayers and joiners with reference to arranging for a code of working rules and an advance of wages. As to the former, the rules were gone through, and an agreement was practically come to; and as to the wage, the masters decided to recommend their Association to pay a maximum sum of 7d. per hour to those men who are considered worth that amount. The joiners' representatives agreed to this, and decided to recommend their Association to accept it, but the bricklayers did not come to a decision, their opinion being that the extra wage should be given all round.

COMPETITIONS, CONTRACTS, AND PUBLIC APPOINTMENTS.

COMPETITIONS.

Nature of Work.	By whom Advertised	Premium.	Designs to be delivered.
Public Baths	Shrewsbury Corp.	50*l.* and 20*l.*	June 1
*Buildings for the Manchester Whitworth Institute	The Council	100*l.* 75*l.* 50*l.* &c.	Sept. 29

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.
Gas-holder Tank	Finedon Gas Co.	John Eunson	May 19
Police Station, Gorton	Lancashire C. C.	*Official*	do
New Streets, Diversion of Stream, &c. Ton Pentre, Neath	R. P. Morgan	.....	do.
Asphalting, &c. South End Schools, Elland	Elland with Greetland School Board	*Official*	May 20
Fittings for Purifiers, Gasworks	Rotherham Corp.	.....	do
Railway Sidings	Leeds Forge Co.	*Official*	do.
House, Shop, and Outbuildings, West Ryton-on-Tyne	Jos. Todd	.....	do.
Poor Law Offices, Becket-street	Derby Guardians	Ernest Ryley	do.
Alterations to South Wellington-street Police Station	Glasgow Police Com.	*Official*	do.
Rowley Regstone (5 000 tons)	Aston Manor Loc. Bd.	W. Augustus Davies	do.
Road-Making, Culvert, &c. Treherbert and Treorchi, Cardiff	Marquess of Bute	.....	do.
*Painting, Woolwich	War Dept.	*Official*	do.
Three Shops, Lower Parliament-row, Hanley, Staffs	J. H. Davis	G. W. Bradford	May 21
Extensions, Board School	Cardiff School Board	Seward & Thomas	do.
*Cleansing, Whitewashing, Painting, &c. Infirmary	St. Pancras Parish	*Official*	do.
*Painting and Cleansing Works, and Repairs, Caterham Asylum	Met. Asylums Board	do.	do.
Additions to Glove Factory, Court Ash, Yeovil	.....	Edward Vining	May 22
Painting, Repairs, &c. at Infirmary	St. George-in-the-East Guardians	Wilson, Son, & Aldwinckle	do.
Premises, Seaham Harbour, Sunderland	Co-op. & Indus. Soc. Lim.	Wm. Milburn	May 23
Hotel, Penygraig, Pontypridd	.....	A. D. Evans	do.
Dwelling-house, Shop, and Premises, Wyndham-street, Bridgend	Mrs. Ann Morgan	G. F. Lambert	do.
*Two Slate Tanks	Cambridgeshire Asy.	*Official*	do.
*Erection, Furnishing, and Heating of School	Swansea School Board	T. P. Martin	do.
Wesleyan Church, Tamworth-st. Lichfield	.....	Thos. Guest	May 25
Grand Stand, Shedding, &c. Show yard, Leek, Staffs	Staffs. Agric. Soc.	*Official*	do.
*Painting, &c. Works, N. W. Fever Hosp.	Met. Asylums Board	do	do
*Construction of Filters, &c. Sewage Works	Nuneaton Local Board	J. S. Pickering	do.
New Premises, Wharton-street, Cardiff	Septimus Fletcher	E. M. Bruce Vaughan	do.
Work at Cemetery, Hebburn	Hedworth, Monkton, & Jarrow Burial Bd.	J. H. Morton	do.
*Brick and Pipe Sewers, &c. &c	St. Giles B. of W.	G. Wallace	do.
*Fooled York Paving Stone	Bermondsey Vestry	*Official*	do.
*Riding School, Stables, and Sheds	War Department	do.	May 26
*Wood Paving Materials	Vestry of Chelsea	F. W. E Higgens	do.
*Construction of Engine House, &c.	West Ham Council	Lewis Angell	do.
*Storage Reservoir, Auxiliary Pumping Station, &c.	Belfast Corporation	*Official*	do.
*Works and Materials	West Ham Council	do.	do.
*Roadmaking Works	Lewisham Bd. of Wks.	do.	do.
Eight Houses, Sowerby Bridge, Yorks	.....	S. Wilkinson	do.
Day-rooms, Dormitories, and Two Pairs Semi-detached Cottages	Hereford Asylum Com.	W. W. Robinson	do.

CONTRACTS.—*Continued.*

Nature of Work or Materials.	By whom Required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.
*Painting, &c. Interior of Casual Wards, Hoxton	Shoreditch Guardians	F. J Smith	May 27
*Jobbing Sewers Works, &c.	Greenwich Bd. of Wks	*Official*	do.
*Broken Granite, Flints, &c.	Hackney B. of W.	J. Lovegrove	do.
*Scavenging and Watering Streets, &c	St. Saviour's B. of W	*Official*	do.
Sewerage Works	Middlewich Loc. B.	R. T. Worth	do.
Extension of Schools, Ely, Cardiff	Cardiff Union Guardians	Seward & Thomas	May 29
Central Stores, West Hartlepool	Co-op. Soc. Lim.	Wm. Young	do.
*Sewerage Works	Stockton-on TeesCorp.	*Official*	do.
*Rebuilding Bridge	Essex County Council	do.	do.
*Bridge over River Inglebourne	do.	do.	May 29
*Iron Fence, Manhole Covers, Step Irons, Gratings, &c.	Hornsey Local Board	T. de Courcy Meade	June 1
Offices, Stores, &c., St. Vincent's Ironworks, Bristol	John Lysaght (Lim.)	R. M. Drake	do.
*Forming and Laying-out of a Public Park	Stockton-on-Tees Cpn.	K. F. Campbell	do.
*Portland Cement, Macadum, & Chippings	Texteth Park Loc. Bd	John Price	do.
Work at Goods Yard, Halton Station	L. & N. W. & G. W. Joint Railways	*Official*	June 2
*Four Houses with Out-buildings at Portsoy	Admiralty	do.	do.
*Steam Water Heater	Edmonton Union	do.	do.
*Roadworks at Fulham	LondonCountyCouncil	do.	do.
*Erection of Stone Bridge over River Taff	Merthyr Tydfil Loc. Bd	do.	do.
Ironwork, Retort House	Preston Gas Co.	Henry Green	June 3
Alterations, &c., to Hospital, Brithdir	Merthyr Tydfil Union Guardians	James Jones	June 4
*Sewerage Works	Atcham R.S.A.	.....	June 6
Additions to Hospital	Chesterfield & N. Derbyshire Hospital	*Official*	June 8
*Superintendent's Lodge, Battersea-park	London County Council	do.	June 9
Lighting Town Hall with Electricity	Manchester Corp	do.	June 17
*Police Stations	Carmarthenshire County Council	do.	June 29
Granite Road Metal (2,000 tons)	Audlem (Nantwich Highway Board	do,	July 1
*Guild Hall, Municipal Buildings	Borough of Oswestry	Henry A. Cheers	No date
Roads, Footpaths, &c. Burton Latimer, North Hants	Building Society	Ed. Sharman	do.
Repairs to Mill. Foxley, Towcester	Geo. Osborn	.....	do.
Eight Houses, Shiremoor, Earsdon	W. Dobinson	.....	do.
Seven Houses, Cannock Wood, Staffs	John M'Min	.....	do.
Twelve Cottages, West Stanley, Durham	West Stanley Colliery Co.	.....	do
Rebuilding Residence and Stables, Ashton, Devon	F. Treeby	E. H. Harbottle	do.
Row of Houses, Blenkinsopp, Greenhead, Carlisle	Thompson & Sons	G. Dale Oliver	do.
Additions to Wesleyan Schools, New Wortley, Leeds	.....	T. Butler Wilson	do.
Three houses. Commercial-road, Halifax	Richard Horsfield	.....	do.
Parish Church. Heckmondwike	.....	Peterson & Cowgill	do.
Presbyterian Church and School, Bedlington, Northumberland	.....	Mr. Macard	do.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary	Applications to be in
*Surveyor, Inspector of Nuisances, &c.	Ware Local Board	125*l.* &c.	May 19
*Building Inspector	Southend Local Board	.....	May 20
*Assistant City Engineer	Cape Town Corp	300*l.*	May 26
*Assistant (Borough Engineer's)	Stockton-on-TeesCorp.	150*l.*	May 22
*Sanitary Inspector	Hanover Square Ves.	200*l.*	June 1
*Inspector of Nuisance	Paddington Vestry	120*l.*	June 4

Those marked with an Asterisk (*) are advertised in this Number. *Competition, p.* iv. *Contracts, pp.* iv., vi. *and* viii. *Public Appointments, p.* xviii.

MEETINGS.

SATURDAY, MAY 16.

Glasgow Architectural Association. — Visit to Kilbirnie Church, &c.

MONDAY, MAY 18.

Royal Society of Antiquaries of Ireland — General Meeting to be held at Kilkenny. 2 p.m.

WEDNESDAY, MAY 20.

British Archæological Association. — 1. Mr. G. Allis on "The Discovery of a Roman Colonnade at Lincoln." 2. Mr. A. G. Langdon on "The Padstow Crosses, Cornwall." 8 p.m.

Guild and School of Handicraft.—Mr. G. Thomson on "The Industrial Partnership of Woodhouse Mills." 8 p.m.

Royal Meteorological Society.—Three papers to be read. 7 p.m.

THURSDAY, MAY 21.

Society for the Encouragement of the Fine Arts.—Mr. R. Phené Spiers on "The Origin of Some Architectural Forms." 8 p.m.

Institution of Electrical Engineers.—8 p.m.

FRIDAY, MAY 22.

Architectural Association.—(1) Election of Officers. (2) Mr. Ernest Newton on "Homelike Houses." 7.30 p.m.

SATURDAY, MAY 23.

Architectural Association.—Visit to Mansions, Palace-court, South Kensington. Meet at 3 p.m.

Incorporated Association of Municipal and County Engineers. — Midland Counties District Meeting at Stourbridge.

RECENT PATENTS:

ABSTRACTS OF SPECIFICATIONS.

8,817.—HINGES: *K. Radler.*—The hinge which is the subject of this patent is made adjustable by means of a screw, and a method is adopted to prevent this adjusting-screw from working loose or changing its position.

19,102. — TARRING FIBROUS MATERIALS: *J. F. Anderson.*—For tarring all kinds of fibrous materials, some of which may be used for roofs, &c., it is claimed that an improved arrangement consists in passing the material to be tarred over an open conductor. The tar is applied in a continuous stream from above by means of a pipe or other conductor, the superfluous tar being passed through a perforated hollow in the conductor or squeezed out by being passed through a pair of rollers.

21,087. — DRAUGHT IN FIREPLACES: *J. Sepulchre.*—This invention consists in giving the draught two exits from the fire, into chimneys, one over the fire and one below the top of the fire, through the fuel; either of these dampers may be closed at will to divert the draught into the other. A plate constituting the back of the grate is raised to open the bottom exit to the chimney, or the lowering of the plate closes the lower exit and opens the top one; while holding the plate midway partially opens both exits.

2,884. — SCAFFOLD BRACKETS: *S. Van Vliet.* — The bracket which is the subject of this patent is so arranged that when in place the weight which is superimposed upon it will cause the bracket to adhere more firmly and tightly fasten itself to the bracket.

2,894.—IMPROVED PAVING: *C. Claussen.*—The paving which is the subject of this patent has a foundation of concrete with a covering layer of asphalte within which are embedded forged or wrought-iron ribs set on their edges and of the same height as the thickness of asphalte. The frames with the ribs are heated and placed in the asphalte paste before it hardens, and only the edge of the iron rib shows above the asphalte.

3,351.—PLASTER SLABS: *R. R. Coursen.*—The slabs referred to in this specification are made in moulds, and have a wire backing. The bottom of the mould is provided with upwardly-projecting wires or headless nails reaching to the level of the top of the mould, and numbered to correspond with the studding and number of wires in the slabs. These form holes in the plaster slab which are convenient for fixing them.

3,724.—CONSTRUCTING STAIR-WAYS: *R. Hermans.*—Where one, two, or three steps are required in out-door work a rough-and-ready method of making them of iron supports filled in with earth is employed.

NEW APPLICATIONS FOR PATENTS.

April 27.—7,209, W. Eddleston, Fasteners for Windows.—7,229, G. Cooper, Self-acting Hooks for Holding Doors or Gates.— 7,234, G. Rieunier, Grates.— 7,250, W. Hoare, Circular Saws.

April 28.—7,279, W. Withington, Disinfecting Water-closets, &c.—7,347, C. Kimplen, Machines for Making Bricks, Tiles, &c.

April 29.—7,359, J. Merrill, Syphon-flushing Cisterns.—7,370, T. Hunt, Glazing Earthenware Pipes, Tiles, &c.—7,389, H. Hill, Barrel Bolts —7,411, W. McKinnon, Chimney Cowl.—7,429, A. Simmons, Combination Tap Socket and Pipe Connexion or Sleeve for Pipe, to enable water or gas to be drawn from any desired part of a pipe without the usual joint; applicable also for closing the open parts of burst pipes.—7,431, J. Cole, Window Fastenings. — 7,432, E. Breething, Brick-moulding Machinery.

April 30.—7465, G. Inkpen, Ventilation of Shop Windows.—7,470, G. Alston, Stoves, Flues, and Fireplaces.—7,475, R. Jeffrey, Door Knockers —7,486, J. De Long, Window Ventilators.—7,497, S. Allin, Check Springs for Doors.—7,507, A. Heming, Sash-fastener.—7,510, R Marshall and E. FitzGerald, Air-propelling or ventilating.

May 1.—7,532, J. Bone and W. Wilton, Sash or Screw-up Sockets for Shop Window Fittings, Arms, Racks, or Branches.—7,534, J. Williams, Glazing.—7,563, F. Marwood, Window-fasteners.—7,567, W. Martin and others, Convertible Window-sashes.—7,576, W. Alexander, Sash-fasteners.

May 2.—7,609, J. Reynolds, Butt Hinges, &c —7,616, T. Bury, Vertical Sanitary Pipe-pressing Machines for Bricks, Wall Coping, Floor Tiles, &c.—7,631, A. Adams and J. Hallam, Sash Fastenings.—7,633, T. & W. Pile, Machines for Moulding and Pressing Clay, &c.—7,646, F. Gibbons, Locks of Window Sashes.—7650, H. Downing, Sash-fasteners.—7,652, H. Earl and W. Briggs, Sanitary Pipes, &c.—7,659, G. Emerton, Glazing, Roofs, Skylights, &c.

PROVISIONAL SPECIFICATIONS ACCEPTED.

4,383, R. Warren, Fastening Attachment for Gates.—4,743, N. Dobbs, An "Engaged" Indicator for Doors.—4,948, H. Smith, Plane for Beading and Side Fillister.—4,981, H. Clark, Gullies, Traps, &c., in the Apparatus for Ventilating Drains, &c.—5,200, W. Burr, Water-waste Preventing Cisterns.—5,807, J. Lander and W. Thompson, Bath Walling and Flooring Tiles —5,866, W. Thompson, Tyeing or Holding Together Door Frames, &c.—5,945, J. McNaughton, Water-closet Cisterns.—6,524, W. Pilkington, Kilns for Annealing Plate-glass. 6,610, G. Haywood, Ventilators.—6,630, J. Griffiths, Street and other Pavements.—6,810, I. Singer and A. Berens, White Lead.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to Opposition for Two Months.

6,747, C. Elliott, Exhausting or Removing Gases or Vapours, and for Ventilating Rooms, &c —8,668, B. Piffard, Varnishes.—9,489, J. and A. Duckett, Water-closets. — 9,977, R. Hickes, Ventilator. — 9,999, R. Halschek, Ventilating by Purified and Ozonised Atmospheric Air.—10,198, E. Waring, Supporting Railway Carriage Doors, &c.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

MAY 4.—By *Ellis & Son:* 40, Mincing-lane, City, u.t. 18 yrs., g.r. 450*l.*, r. 1,112*l.*, 3,250*l.*—By *Rutley, Son, & Vine:* 66, St. George's-rd, Regent's-park, u.t. 49 yrs., g.r. 5*l.*, r. 42*l.*, 375*l.*—By *J. Carey & Co.:* 49, Maury-rd., Stoke Newington, u.t. 84 yrs., g.r. 7*l.*, 380*l.*—By *F. Varley:* 1 to 7 (odd) Palmerston-rd., Holloway, u.t. 73 yrs., g.r. 28*l.*, r. 120*l.*, 700*l.*—By *King & Chasemore:* "Rusper House Farm," Rusper, Sussex, f., 50a. 0r. 12p., r. 15*l.*, 1,300*l.*; enclosures of f. land, 54a. 0r. 15p., r. 10*l.*, 650*l.*; enclosures of f. land. 14a. 1r. 22p., r. 5*l.*, 270*l.*; a cottage and 28a. 3r. 16p., f. Leith-hill, Surrey, 5,500*l.*; "Clark's Green Farm," Capel, 64a. 1r. 6p, f. 2,000*l*; "Clark's Green Farm," northern position, 135a. 1r. 18p., f. 2,500*l.*—By *F. S. Priest* (at Willesden): Thirty plots of freehold land, Willesden, 1,921*l.*

MAY 5.—By *W. Copping:* 77, Ifield-road, West Brompton, u.t. 58 yrs., g.r. 8*l.*, r. 40*l.*, 360*l.*; 9, St. Ann's

Park-ter., Wandsworth, u.t. 75 yrs., g.r. 8*l*, r. 45*l*., 280*l*. —By *W. H. Keer:* F.g.r. of 70*l*. a yr., with reversion in 75 yrs., Notting-hill, 1,680*l*. ; f.g.r. of 59*l*. 10s., with reversion in 75 yrs., 1,490*l*.—By *J. Hibbard:* 126, Mildmay-rd., Islington, f., r. 45*l*., 565*l*.—By *Debenham, Tewson, & Co.:* The residences "Rathcoole" and "The Lawn," Hornsey, and 10¼ acres, part f. and part c., 7,100*l*.—By *Driver & Co.:* "The Savings Bank," Peckham rd., u.t. 378 yrs., no g.r., area 10,100 ft., 1,000*l*. ; F.g.r. of 15*l*., with reversion in 18 yrs., Lee-ter., Blackheath, 800*l*.—By *C. Slee & Sons:* 16 and 17, Leighton-grove, Kentish-town, u.t. 50 yrs.. g.r, 12*l*. 12s., r. 60*l*., 545*l*.—By *Mullett, Booker, & Co.:* I.g.r. of 36*l*. 5s., Gloucester-pl., Paddington, u.t. 46 yrs., g.r. 4*l*. 5s., 570*l*. ; i.g.r. of 45*l*., Porteus-rd., u.t. 45 yrs.. g.r. 5*l*., 730*l*. By *Moss & Jameson:* 3, Pelham-cres., Kensington, u.t. 22 yrs., g.r. 12*l*., 780*l*. ; 14 and 16, Queen's-rd., Dalston, u.t. 53 yrs., g.r. 9*l*., r. 83*l*. 14s., 555*l*. ; 4, Clifton-hill, St. John's Wood, u.t. 43 yrs., g.r. 10*l*. 10s., r. 55*l*., 450*l*. ; 10, High-st., u.t. 9¼ yrs., no g.r., r. 55*l*., 300*l*. ; 9, Portland-ter., Regent's-park, u.t. 9¼ yrs. g.r. 10*l*., 200*l*. By *Messrs. Cobb* (at Rochester): Three freehold cottages, Miles-pl., r. 23*l*. 8s., 210*l*.

MAY 6.—By *J. & R. Kemp & Co.:* L.g.r. of 60*l*. 13s., u.t. 50 yrs., Walpole-st., &c., Chelsea, 1,110*l*. ; No. 167, Clapham-rd., f., 1,250*l*. ; 123, Broad-st., Ratcliff, c., 800*l*.—By *Pettitt, Son, & Bryne:* 32, Warwick-st., Pimlico, u.t. 46½ yrs., g.r. 8*l*., r. 110*l*., 1,505*l*. ; 17, Graham-st., u.t. 30 yrs., g.r. 6*l*., r. 46*l*., 490*l*. ; 18 and 19, Rillington-pl., Notting Hill, u.t. 73 yrs., g.r. 13*l*., r. 74*l*. 12s., 545*l*.—By *Rushworth & Stevens:* 37, Albemarle-st., Piccadilly, f., r. 300*l*., 5,600*l*.—By *Protheroe & Morris:* "Greenfield Farm," Felstead, Essex, 23a. 0r. 4p., f., 400*l*. —By *F. Jolly & Co:* 57, Osbaldeston-rd., Stoke Newington, u.t. 87 yrs., g.r. 8*l*. 8s., 455*l*. ; 136, Abbott-rd., Bromley-by-Bow, u.t. 82 yrs., g.r. 5*l*., r. 33*l*. 16s., 230*l*.—By *A. Richards*: 5, Fortune-gate, Harlesden, u.t. 78 yrs., g.r. 4*l*., r. 26*l*. 8s., 325*l*. ; 19, Stanley-rd., and 26, Canterbury-rd., Islington, u.t. 61 yrs., g.r. 7*l*. 10s., r. 60*l*. 8s., 500*l*. ; 110, Spencer-rd., Hornsey, u.t. 61 yrs., no g.r., r. 24*l*., 300*l*. ; F.g.r. of 5*l*., with reversion in 59 yrs., The Ter., Tottenham, 110*l*. ; F.g.r. of 8*l*. 15s., with reversion in 59 yrs., Dorset-villas, 180*l*. ; F.g.r. of 25*l*. 15s., with reversion in 59 yrs., Northumberland-park, 550*l*. ; 1 to 6, Thomas-pl., f., r. 108*l*., 1,030*l*. ; 2, 3, 7, and 8, Castle-pl., f., r. 69*l*. 15s. 4d., 715*l*. ; Eight cottages, Fountain-sq., u.t. 13 yrs., g.r. 2*l*. 10s , r. 65*l*., 115*l*. ; 188, Upper Fore-st., Edmonton, c., r. 30*l*., 470*l*. ; 'Marsh House," Angel-rd., u.t. 15 yrs., g.r. 4*l*., 200*l*. ; "The Fountain Nursery," c., r. 20*l*., 510*l*. ; 1 and 2, Angel Cottages, f., r. 23*l*. 8s , 230*l*. ; 1 to 4, Rose-cottages, Ponder's End, f., r. 57*l*. 4s , 600*l*. ; f.g.r. of 40*l*., with reversion in 48 years, Bonny-st., Camden Town, 900*l*. ; 41, Camden-rd., u.t. 48 yrs., g.r. 12*l*., r. 70*l*., 800*l*. ; 2, Dalston-lane, Dalston, f., r. 100*l*., 2,150*l*. ; 157, Morning-lane, Homerton, f., r. 30*l*., 280*l*.

MAY 7.—By *Newbon & Co.:* No. 17, Canonbury Park North, u.t. 45 yrs., g.r. 9*l*., 770*l*. ; 4, 5, 6, and 9, The Crescent, Edmonton, f., r. 72*l*., 755*l*. ; 1 and 2, Crescent-cottages, f., r. 17*l*. 16s., 200*l*.—By *E. Stimson:* No. 350, Clapham-rd., f., r. 36*l*., 800*l*. ; 25, Wenlock-st., Hoxton, u.t. 15 yrs., g.r. 4*l*., r. 30*l*., 155*l*.—By *E. Wood:* 9, Smart-st., Bethnal-green, f., r. 18*l*. 4s., 145*l*.—By *Wilkinson, Son, & Welch:* 19, Charlotte-st., Brighton, f., 775*l*.

MAY 8.—By *G. Drewitt:* "The Newark Flour Mills," near to Byfleet, 24a. 3r. 0p., f., 2,550*l*.—By *Toplis & Roberts*: l.g.r. of 19*l*., u.t. 71 yrs., g.r. 4*l*., Clyde-st., Brompton, 350*l*.—By *Montagu & Robinson:* f.g.r. of 130*l*., with reversion in 24½ yrs., Worship-st., Finsbury, 8,600*l*. ; f.g.r. of 115*l*., with reversion in 15 yrs., 7,200*l*. ; a peppercorn rent, Dysart-st., with reversion in 15 yrs., 460*l*. ; 24 and 26, Woodbridge-st., Clerkenwell, u.t. 22 yrs., g.r. 8*l*., r. 100*l*., 620*l*.—By *Hampton & Sons:* 25, Cambridge-av., Kilburn, u.t. 67 yrs., g.r. 10*l*., 345*l*.—By *W. W. Jenkinson:* 2 and 3, Bank-buildings, Camberwell, f., r. 200*l*., 3,710*l*. ; 4 and 5, Bank-buildings, f., r. 195*l*., 3,860*l*.—By *Heaps, Son, & Reeve:* 4, Brondesbury Park-villas, Willesden, u.t. 77 yrs., g.r. 18*l*., 1,000*l*.

[*Contractions used in these lists.*—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; yd. for yard, &c.]

PRICES CURRENT OF MATERIALS

TIMBER.		
Greenheart, B.G. ton	8/0/0	9 0/0
Teak, E.I... load	8/10/0	14/0/0
Sequoia, U.S.ft.cu.	2/3	3/0
Ash, Canada load	2/10/0	4/5/0
Birch, do.	2/5/0	4/5/0
Elm, do.	3/10/0	4/15/0
Fir, Dantsic, &c.	2/0/0	3/15/0
Oak, do.	2/10/0	4/10/0
Canada.....	4/17/6	6/10/0
Pine, Canada red	2/10/0	3/10/0
Do, yellow	2/0/0	5/10/0
Lath, D'ntsic, fath	5/0/0	6/0/0
St. Petersburg	5/0/0	7/0/0
Deals, Finland, 2nd & 1st std 100	7/15/0	10/10/0
Do, 4th & 3rd..	7/5/0	8/5/0
Do. Riga	6/5/0	7/15/0
St. Petersburg, 1st yellow ..	9/15/0	14/10/0
Do. 2nd yellow	8/5/0	9/5/0
Do. white	6/15/0	10/10/0
Swedish	6/15/0	15/15/0
White Sea	8/5/0	17/5/0
Canada, Pine 1st	13/0/0	24/0/0
Do. do. 2nd....	9/0/0	15/10/0
Do. do. 3rd, &c.	6/10/0	10/0/0
Do. Spruce. 1st	8/15/0	11/0/0
Do. do. 3rd & 2nd.....	6/5/0	7/15/0
New Brunswick	5/5/0	7/5/0
Battens, all kinds	3/10/0	15/10/0
Flooring Boards, sq., 1 in. prep. 1st	0/10/0	0/14/0
Do. 2nd.....	0/9/0	0/10/6
Other qualities	0/5/0	0/7/6
Cedar, Cuba ..ft.	/4	/4½
Honduras, &c.	/4	/4½
Mahogany, Cuba.	/4½	/6½
St. Domingo, cargo av	/4½	/6½
Mexican do. do	/4½	/5½
Tobasco do. do	/5½	/7
Honduras do..	/5½	/6½
Box, Turkey ton	4/0/0	13/0/0
Rose, Rio.....	10/0/0	20/0/0
Bahia	9/0/0	18/0/0

TIMBER (*continued*).		
Satin, St. Domingo .....ft.	0/0/10	0/1/3
Porto Rico	0/0/10	0/1/6
Walnut, Italian..	0/0/3½	0/0/7
METALS.		
IRON—Bar, Welsh, in London..ton	6/5/0	6/15/0
Do. do. at works in Wales	5/15/0	6/5/0
Do. Staffordshire, in London	6/5/0	7/0/0
COPPER—British, cake and ingot	56/0/0	57/0/0
Best selected ..	59/0/0	60/0/0
Sheets, strong..	66/0/0	67/0/0
Chili, bars	52/10/0	0/0/0
YELLOW METAL lb.	0/0/6	0/0/6½
LEAD — Pig, Spanish....ton	12/11/3	0/0/0
English, com. brands	12/12/6	0/0/0
Sheet, English, 3 lbs. per sq. ft. and upwards ..	14/10/0	0/0/0
Pipe	15/0/0	0/0/0
ZINC — English sheet .....ton	26/5/0	0/0/0
Vieille Montagne	26/15/0	0/0/0
TIN—Straits	90/10/0	0/0/0
Australian	90/15/0	0/0/0
English Ingots	94/10/0	0/0/0
OILS.		
Linseed .....ton	22/7/6	22/10/0
Cocoanut, Cochin	35/0/0	35/10/0
Do. Ceylon	29/0/0	29/10/0
Palm, Lagos	26/10/0	27/0/0
Rapeseed, English pale	31/10/0	0/0/0
Do. brown	30/0/0	0/0/0
Cottonseed ref...	22/5/0	0/0/0
Oleine	21/15/0	24/0/0
Lubricating, U.S.	6/0/0	7/0/0
Do. refined	7/10/0	12/0/0
TAR—Stockholm barrel	1/1/6	1/2/0
Archangel	0/13/6	0/0/0

TENDERS.

[Communications for insertion under this heading must reach us *not later than* 12 *noon on Thursdays.*]

ALMONDSBURY.—For building "Prospect House," Almondsbury, near Bristol. Messrs. Bernard & Drake, architects, Bristol :—

J. Blackwell	£762 17	E. T. Hatherly	£694 0
Geo. Tucker	754 14	R. Wilkins & Son*	603 0
Wm. Cowlin & Son	705 0	W. Hendy	580 0
A. Tambling	700 0	Thos. H. Brown	500 0

* Accepted.

ASHFORD.—For the re-erection of farm buildings at Court Lodge Farm, Great Chart, Ashford, Kent, for Colonel Toke. Mr. A. R. Stenning, architect, 121, Cannon-street. Quantities by Messrs. Mew & Ovenden, 121, Cannon-street :—

Wood	£1,037	Howland	£922
Baker	991	Steddy & Co.	920
Peters	970	Knock, Ashford*	900
Giles, Burden, & Giles	950		

* Accepted.

AUDENSHAW.—For sewering a portion of Audenshaw-road, from Kershaw-lane to Manchester-road. Mr. J. H. Burton, surveyor, Ashton-under-Lyne :—

Worthington & Pownall	£373 8 0	Underwood & Bros. ..	£264 17 0
Wm. Clarke.....	357 19 0	Thos. Storer, Denton*	238 9 0
Wm. Bennison	279 1 0	F. Marland	230 0 0

* Accepted.

BRISTOL.—For heating apparatus for new Board Schools, at Kingswood, for the Oldland School Board. Mr. W. L. Bernard, architect, 3, St. Stephen's-chambers, Baldwin-street, Bristol :—

J. Gray	£1,096 0 0	Skinner & Board	£895 0 0
J. Jones & Sons	795 0 0	T. Wood & Co.....	583 16 5
Rosser & Russell, Lim	766 11 0	J. Crispin & Sons	559 11 8
Wenham & Waters, Lim.....	755 0 0	G. Tankard*.....	545 7 6
		J. Weech†	490 0 0
		S. Diplock‡	289 15 0

[Architect's estimate, £600]

* Too late. † Accepted. ‡ Informal.

BRISTOL.—For laying carriage-ways of Nicholas-street, Bridge-street, Small-street, and St. Stephen-street with wood paving (5,978 square yards), for the Urban Sanitary Authority. Mr. Fredk. Ashmead, M. Inst. C.E., 51, Prince-street, Bristol :—

Chas. Bradshaw & Son	£3,213 3 6	Jas. Durnford & Son	£3,188 5 4
		A. Krauss (accepted)	2,715 0 2

[All of Bristol.]

BRISTOL.—For alterations to premises, 8, Clare-street, for Messrs. Frost & Reed. Messrs. Bernard & Drake, architects, 24a, College-green, Bristol :—

J. E. Davis	£525 0 0	R. Wilkins & Son	£479 12 5
R. H. Ridd	504 0 0	J. Perrott (accepted)..	475 0 0

BURTON-UPON-TRENT.—For the erection of a new retort-house, iron roof, and other ironwork at the gasworks, for the Corporation. Mr. F. L. Ramsden, engineer, Gasworks, Burton-upon-Trent :—

J. & Wm. Horton....	£1,442 1 5	E. Cockey & Sons, Ld.	£1,015 13 3
Daniel Howard	1,217 16 5	Thornewill & Warham	1,093 8 2
Hough & Fetgate....	1,172 7 9	E. C. & J. Keay	921 15 10
R. Dempter & Sons..	1,098 16 10	W. C. Holmes & Co.,	
J. Abbot & Co., Ltd.	1,087 17 9	Huddersfield*	570 4 6
Thos. Piggott & Co..	1,049 0 9		

* Accepted.

CAMBRIDGE.—For proposed additions and alterations to the house-block of The Leys School, for the Governors. Mr. Robt. Curwen, architect, 168, Palmerston-buildings, E.C. :—

E. Lawrence & Sons	£2,270	S. & W. Pattinson	£1,954
Holloway Brothers.....	2,135	Kerridge & Shaw	1,949
Kirk & Randall	2,124	J. L. Glasscock & Son,	
W. Saint.....	2,019	Bishop's Stortford*	1,905
J. Otway.....	1,964		

* Accepted provisionally.

CASTLE CARY (Somerset).—For the erection of new organ transept to the Parish Church, Castle Cary. Messrs. C. & C. B. Benson, architects, Yeovil. Quantities by architects :—

T. Lydford	£272 0 0	J. L. Francis, Castle Cary (accepted)	269 10 0

CHINGFORD.—For alterations and additions to the "Prince Albert" public-house, Chingford, Essex, for Mr. R. Parkinson. Mr. Fred. A. Ashton, architect, Stratford, E. :—

H. Whitty.....	£1,953	S. W. Hawkings	£1,559
J. Linzell	1,759	J. Hughes	1,550
W. Shurmur.....	1,692	F. Voller	1,546
F. J. Nickolds.....	1,645	Hearle & Farrow (accepted)	1,478

CHINGFORD.—For erecting parish room, Chingford. Mr. W. Stair, architect :—

Wm. Shurmur	£891	Willmott	£566
Wells	637		

EBBW VALE.—Accepted for various works in connexion with the extension of the waterworks for the Local Board. Mr. T. J. Thomas, Engineer, Local Board Offices, Ebbw Vale :—

Contract No. 1.—Supplying Cast Iron Pipes.

J. & S. Roberts, Wet Bromwich	£923 10 6

Contract No. 2.—Supply of Valves, &c.

J. Blakeborough & Son, Brighouse	131 18 6

Contract No. 3.—Pipelaying.

T. Jones Davies, Cardiff	280 11 6

Contract No. 4.—New Filter Beds, Tank, and New Road.

T. Jones Davies, Cardiff	£1,825 0 0

GESTINGTHORPE (Essex).—For alterations and additions to Over Hall, for Mr. W. E. Oates. Mr. Arthur Blomfield Jackson, architect, 65, Chancery-lane, W.C. Quantities by Mr. J. Rookwood :—

Killby & Gayford	£3,332 0	Grimwood & Sons.....	£2,896 0
S. Parmenter.....	3,179 0	H. Runnacles, Halstead*	2,793 10

* Accepted.

HORNSEY.—For supplying a traction engine and steam road-roller, combined, for the Hornsey Local Board. Mr. T. de Courcy Meade, Engineer :—

Wallis & Stevens.....	£565	Aveling & Porter, Rochester*	£513
Fowler & Co.	535	Green & Son.....	507
Fowell & Son	533	J. & H. McLaren	495

* Accepted.

LONDON.—For rebuilding the London Commercial Sale Rooms, Mincing-lane and Mark-lane, E.C., for the Directors of the London Commercial Sale Rooms, Limited. Mr. E. B. I'Anson, M.A., architect. Quantities by Messrs. D. Campbell & Son, 69, Finsbury-pavement, E.C. :—

Hall, Beddall, & Co.	£93,950	Peto Bros.	£91,210
Cubitt & Co.....	92,825	Higgs & Hill	89,994
Grover & Son	92,300	Lawrence & Sons	89,768
Rider	92,158	Charteris.....	88,587
Ashby & Horner	91,980	Chappell	85,966
Colls & Sons.....	91,333		

LONDON.—For erecting offices, Duke-street, Aldgate. Messrs. Bridgman & Goss, architects :—

Gre nwood.....	£4,576	Jocelyn, Young & Co.....	£3,997
Morter.....	4,464	Lawrence & Son	3,989
Nightingale	4,296	Dixon	3,983
Kirk	4,169	Toms	3,883
Neave & Neave.....	4,000	S. R. Lamble (accepted) ..	3,787
Perry & Co.	3,997	Williams	3,549

LONDON.—For erecting shop in Walworth-road, for Mr. W. Hurlock. Messrs. Lander & Bedells, architects :—

Williams	£3,883	Burman & Son.....	£3,159
Smith & Son.....	3,320	Holloway Bros.	3,034
Ebbage	3,319	S. R. Lamble*	2,993
Mattock Bros.	3,193		

* Accepted.

LONDON.—For erecting pianoforte factory in Kentish Town-road, for Mr. Carr. Mr. W. H. Boney, architect :—

Davenall (accepted)	£1,550 0 0

LONDON.—For the enlargement of the Broomsleigh-street school, West End, Hampstead, by 394 places, for the School Board for London. Mr. T. J. Bailey, Architect :—

W. M. Dabbs	£4,231	James Longley & Co.	£3,940
Killby & Gayford	4,223	J. Bulls, Son, & Co., Ltd...	3,875
Patman & Fotheringham	4,162	S & W. Pattinson	3,764
E. Lawrance & Sons	4,019	Treasure & Son*	3,664

* Recommended by the Works Committee for acceptance.

LONDON.—For the erection of a school to provide accommodation for 800 children on the site in Childric-road, New Cross, and for the erection of laundry and cookery centre, for the School Board for London. Mr. T. J. Bailey, Architect :—

Foster & Dicksee	£21,019	Thomas Boyce	£18,972
J. W. Hobbs & Co., Limited	20,498	J. T. Chappell	18,959
S. & W. Pattinson.....	20,074	Holloway Bros.	18,857
Treasure & Son	19,336	Hart Bros.	18,426
W. H. Lorden & Son	18,687	Kirk & Randall	17,716
		H. Lovatt*	17,226

* Recommended by the Works Committee for acceptance.

LONDON.—For cleaning, painting, and repairing the interior of the Brentwood Industrial School, for the School Board for London. Mr. T. J. Bailey, Architect :—

E. Lawrance & Sons	£540	Atherton & Latta	£352
W. Gregar & Son.....	493	J. T. Robey*.....	337
F. J. Coxhead	481		

* Accepted by the Works Committee.

LONDON.—For the erection of a school to provide accommodation for 1,200 children on the site in Honeywell-road, Wandsworth, and also for the erection of a schoolkeeper's house, with a cookery centre underneath, for the School Board for London. Mr. T. J. Bailey, Architect :—

Peto Bros.	£22,000	Killby & Gayford	£20,249
Foster & Dicksee	20,840	J. W. Hobbs & Co., Ltd. ..	20,131
Hart Bros.	20,732	Holloway Bros.	19,969
J. T. Chappell	20,276	H. Lovatt*	18,959

* Recommended by the Works Committee for acceptance.

LONDON.—For erecting public library, Perry-hill, Lewisham, S.E., for the Lewisham Board of Works. Mr. A. L. Guy, architect :—

Waddington.....	£342 10 0	Christmas	£283 18 4
Sykes	304 0 0	Robson, Lewisham....	250 0 0

* Accepted.

LONDON.—For rebuilding the "Grecian" Restaurant, Strand. Messrs. Saville & Martin, architects :—

E. Toms.....	£4,245	Bywaters	£3,758
S. Goodall.....	4,233	Gregory & Co.	3,727
W. Shurmur.....	4,194	Gould & Brand.....	3,697
Ashby Bros.....	3,770		

LONDON.—For repairs at 35, Commercial-street, for Mr. E. J. Rose. Messrs. Wilson, Son, & Aldwinckle, architects :—

Todd	£545	Mills	£483
Shurmur	495	Staines	409

LONDON.—For erecting engine-room, chimney-shaft, &c., at Lower Thames-street, for the Laing, Wharton, & Down Syndicate. Mr. W. Barnett, architect :—

Hobbs & Co.	£3,766	Stimpson	£2,960
T. Boyce.....	3,723	W. Shurmur	2,790
Pattinson	3,213	J. H. Mollett	2,750

LONDON.—For building ten cottages in Kenmure-avenue, Hackney Mr. J. Hamilton, architect :—

Dabbs	£2,244	Hayworth & Son.....	£1,947
Godfrey & Son.....	2,227	Beale	1,500
Wm. Shurmur.....	2,196		

LONDON.—For the erection of Mission premises, Warden-road, Kentish-town. Messrs. Spalding & Cross, architects, 15, Queen-street, E.C. Quantities by Mr. Bernard Swinstead :—

Pocock	£3,633	Outhwaite	£2,863
Dove Bros.....	3,275	Gould & Brand.....	2,835
Toms	2,970	Holloway	2,800
Neave & Neave.....	2,950	W. & H. Castle, Southwark-bridge-road (accepted) ..	2,743
Shepherd	2,894		

LONDON.—For renovations to Wycliffe Chapel and Schools, Philpot-street, Stepney :—

W. Gladding	£225 0 0	Curtis	£145 10 0
Cleaver	183 0 0	G. Barber (accepted)..	138 0 0
E. Tait & Co.	151 15 0	W. Catmur	111 0 0

LONDON.—For erecting stabling at Loughborough Junction. Mr. Walter Hall, architect, 38, Chancery-lane :—

Roberts & Co.....	£250 0	G. Perry	£215 10
Isaac Whiteing.....	218 0	E. W. Mitchell, Brixton*	215 0

* Accepted.

MOUNTS (Devon).—For the restoration of Woodleigh Church, St. Mary's Church, for the Vicar and Churchwardens. Mr. Geo. H. Fellowes Prynne, architect, 10, Torrington-square, London, W.C. Quantities by Mr. R. Henry Hale, surveyor, 6, Duke-street, Strand, W.C. :—

Lay thorne & Goad ..	£2,759 9 0	F. Vanstone	£1,776 0 0
Reed, Blight & Co., Limited	2,378 0 0	W. Harvey & Co. ..	1,645 0 0
Philip Blowey	1,833 0 0	J. A. Steere	1,499 5 0
		Farr Bros.	1,100 17 8

NEWCASTLE-ON-TYNE.—For rebuilding stone piers and walls &c., at cemetery, for the St. John, Westgate, and Elswick United Burial Board. Messrs. Stockwell & Spicer, architects, 11, Pilgrim-street, Newcastle-on-Tyne. Quantities by architects :—

J. & W. Lowry.....	£1,380 0 0	Geo. Scott & Sons,	
Robt. Veitch.....	944 16 0	Douglas-terrace,	
W. & W. Scott.....	890 1 0	Newcastle-on-Tyne*	£850 0 0

* Accepted.

NORTHWICH.—For the erection and formation of a new cemetery at Witton, for the Witton and Dane Bridge Burial Board. Mr. James Holland, architect, Castle, Northwich. Quantities by the architect :—

		Boundary-walls.
Winnard	£3,025	£1,450
Hamilton	2,900	1,450
Leicester	3 023	1,249
Morris	2,625	1,377
Sylance & Sons, Northwich (accepted)..	2,260	920
Matthews (too late).....	2,430	885

ORPINGTON (Kent).—For decorative repairs and painting works to houses. Mr. St. Pierre Harris, architect and surveyor, 1, Basinghall-street, E.C. :—

W. R. Taylor.....	£398 0	Holt & Son	£347 0
McLachlan & Sons	397 15	Somerford & Son*.....	265 0

* Accepted.

PONTYPOOL.—For the erection of a master's house and premises, at Pontnewynydd, for the Trevethin School Board. Mr. E. A. Lansdowne, architect, High-street, Newport, Mon. :—

H. A. Bailey	£420 0	W. Jones, Pontypool	
Morgan & Evans	407 0	(accepted)	£403 10

PONTYPRIDD.—For the erection of twenty-four cottages at Ynysybwl. Mr. R. Llewellyn, architect, Ynysybwl :—

J. Howells.....	£3,768	J. Rees (accepted)	£3,720

[Both of Ynysybwl.]

PRESTATYN (North Wales).—For the erection of a day school and outbuildings. Mr. J. H. Burton, architect, Warrington-street, Ashton-under-Lyne :—

J. Williams & Sons ..	£600 0 0	Jones & Roberts	£495 0 0
Wright & Sons.....	595 0 0	J. Pritchard.....	455 0 0
W. Williams	591 17 10	G. Eames, Prestatyn (accepted)	408 5 0
F. Foulkes & Sons	496 0 0		

READING.—For the erection of the western portion of a chapel at Bradfield College. Mr. J. Oldrid Scott, F.S.A., architect, 35, Spring-gardens, S.W. Quantities by Mr. H. L. Beckwith, 14, North John-street, Liverpool :—

Lovell	£5,925 0	Botterill	£4,674 0
Franklin	5,507 0	Thompson	4,658 0
Dove Bros.	5,010 0	Kimberley	4,576 0
Dobson.....	4,898 0	Webster & Cannon	4,500 10
Higgs & Son.....	4,861 0	Wheeler, Reading*	4,386 0

* Accepted.

RICHMOND (Surrey).—For making up private streets. Mr. Walter Brooke, Borough Surveyor :—

	Lancaster Park.	St. George's-road, Trinity, &c., Roads.
B. Cooke & Co.	£1,930 0 0	£1,430
J. G. B. Marshall	1,740 0 0	—
Neave & Son	1,698 0 0	1,298
Nowell & Robson	1,658 0 0	1,271
E. Hawkins	1,400 0 0	975
D. W. Lewis, Southsea	1,380 0 0	*960
W. H. Wheeler	1,300 0 0	1,074
J. Munro, Richmond	*1,272 3 6	1,009

* Accepted.

ROMFORD.—For new infirmary and other works at Romford Union Workhouse. Mr. Frank Whitmore, architect, Chelmsford. Quantities by Messrs. Stanger & Son, London :—

	Dining Hall, Kitchen, &c.	Infirmary.	Total.
Woodard & Co.	£5,700	£17,100	£22,800
S. & W. Pattinson	5,738	16,561	22,299
B. E. Nightingale	5,588	16,576	22,164
J. Shillitoe & Son	5,800	16,100	21,900
Perry & Co	5,713	16,081	21,794
Holloway Bros.	5,415	16,121	21,536
G. Grimwood & Co.	5,617	15,879	21,496
Jas. Holland	5,262	15,514	20,776
H. Everett & Son	5,147	15,247	20,394
J. S. Hammond, Romford*	4,953	13,640	18,593

* Accepted.

ST. ALBANS.—For the erection of a residence for Mr. W. H. Speer, at St. Albans. Quantities by Messrs. Cuxson & Leigh. Mr. F. W. Kinneir Tarte, architect, 36, Furnival-street, Holborn :—

	Residence.	Sanitary work.
J. & W. Savage	£4,166 0 0	£292 0 0
W. G. Dunham	3,790 0 0	290 0 0
Boff Bros.	3,625 0 0	311 0 0
C. Misbin	3,540 0 0	280 0 0
Turner & Co., Limited, Watford (accepted)	3,387 0 0	274 0 0
R. P. Beattie	—	315 0 0

ST. LEONARDS-ON-SEA.—For alterations, additions, and improvements at the "Royal Victoria Hotel," St. Leonards-on-Sea. Mr. Arthur Wells, architect, Hastings :—

Thos. Salter	£5,720	P. Jenkins	£4,925
T. Lester	5,695	W. J. Adcock	4,674
Eldridge & Cruttenden	5,522	Taylor Bros., Hastings (accepted)	4,386
H. E. Cruttenden	5,508		
A. H. White	5,124		

For Hydraulic Passenger Lift.

Waygood & Co., London (accepted) £575 0 0

ST. PAUL'S CRAY (Kent).—For the erection of stables to private residence. Mr. St. Pierre Harris, architect, 1, Basinghall-street, E.C. :—

Somerford & Son	£521	T. Knight	£471
R. A. Lowe	487	W. Owen (accepted with modifications)	449
D. Payne	485		

SHALFORD (Surrey).—For alterations and repairs to the "Parrot Inn," Shalford, near Guildford, Surrey, for Mr. E. Savill. Mr. Fred A. Ashton, architect, Stratford, E. :—

Hearle & Farrow	£240 0	Mitchell Bros.	£225 0
J. & F. Bane	239 0	T. E. Downes, Stoke*	167 10

* Accepted.

SOUTHBOURNE (Hants).—For the erection of house at Southbourne, for Dr. Yelverton Dawson. Mr. A. R. Stenning, architect, 121, Cannon-street. Quantities by Messrs. Mew & Ovenden, 121, Cannon-street :—

Hoare	£3,191	Sabey, London*	£2,987
Palmer	3,040		

* Accepted.

SUTTON (Surrey).—For erecting three pairs of small villa residences at Sutton, for Mr. A. Skinner :—

Hy. Adams £1,285 0 0

[No competition.]

UPPER WARLINGHAM (Surrey).—For the erection of a new billiard-room and stabling at "Flintfield," Upper Warlingham, Surrey, for Mr. H. D. Rawlings. Mr. David Burnett, F.S.I., architect :—

	Billiard-room.	Stabling.	Total.
T. Little	£797	£607	£1,404
J. Horrocks	500	496	996
W. Marriage, Croydon (accepted)	420	565	985

YEOVIL.—For the erection of a factory in Addlewell-lane, for Messrs. Clothier, Hitchcock, Giles, & Co. Messrs. C. & C. B. Benson, architects, Yeovil. Quantities by the architects :—

Carey	£1,125 10 0	Bird & Pippard	£917 0 0
Wallbridge	1,077 14 0	Hutchings	913 17 4
Lye & Sons	971 16 5	Andrews, Thornford*	910 0 0
Green	923 0 0		

* Accepted.

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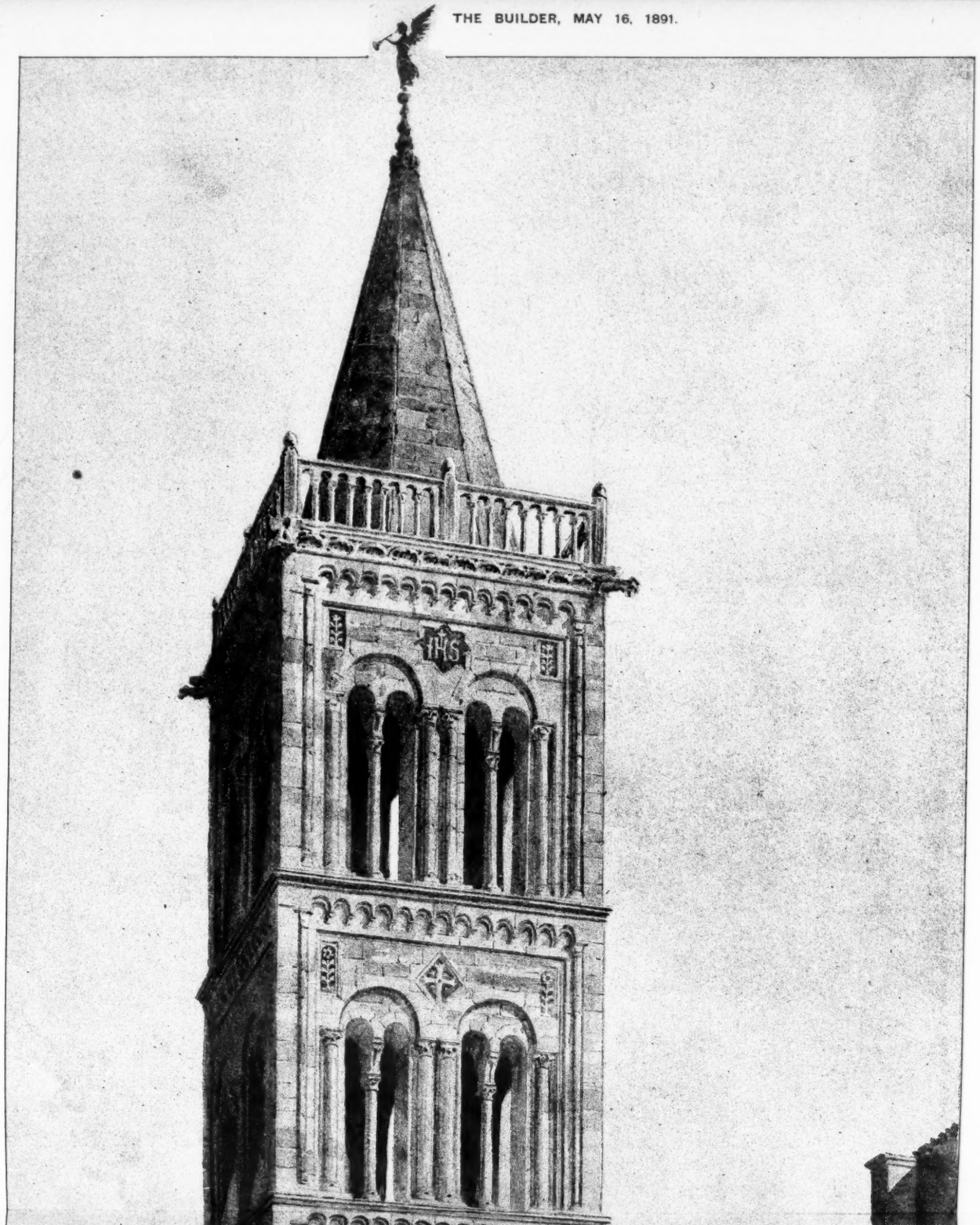
Henry A. Hunt & Ralph Clutton · Hon^y Archts.
Fred^k G. Knight · Archt.

PHOTO-LITHO SPRAGUE & Co. 22 MARTINS LANE CANNON ST LONDON E.C.

No. 1796, Royal Academy Exhibition, 1891.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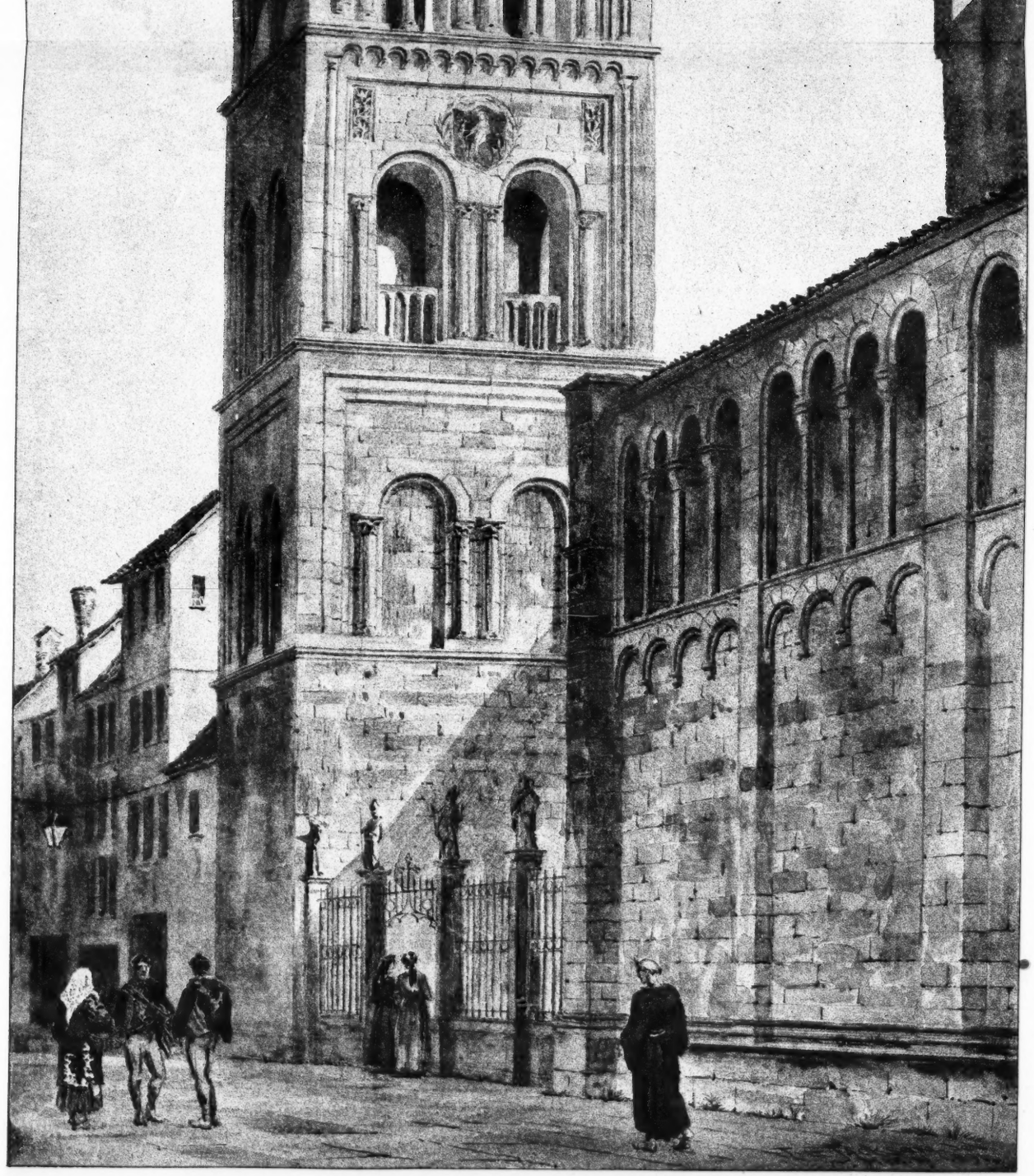
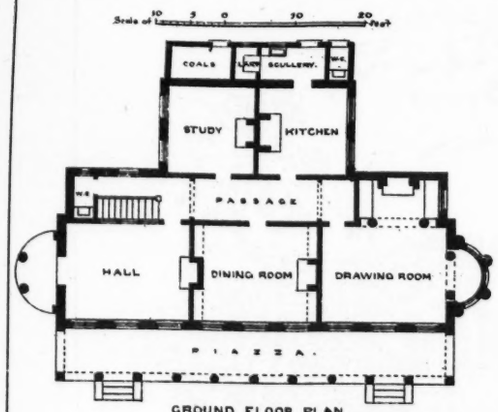


"INK-PHOTO" SPRAGUE & Co. 22, MARTINS LANE, CANNON ST. LONDON, E.C.

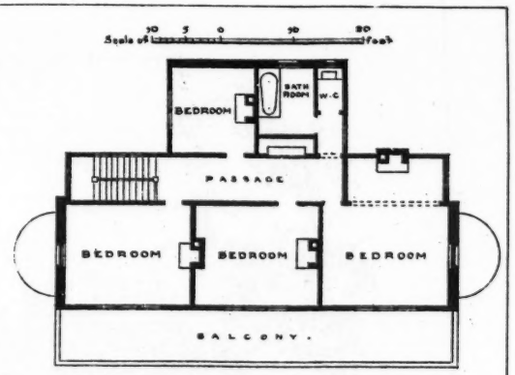
DESIGN FOR THE CAMPANILE FOR THE CATHEDRAL, ZARA, DALMATIA.—Mr. T. G. Jackson, Architect.

(As modified from the original design, published in THE BUILDER, *of* May 25, 1889.*)*

No. 1734, Royal Academy Exhibition, 1891.



GROUND FLOOR PLAN

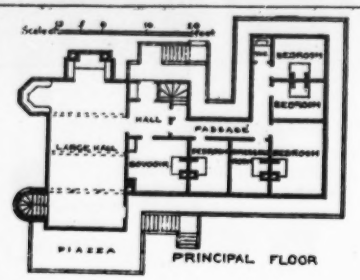


FIRST FLOOR PLAN

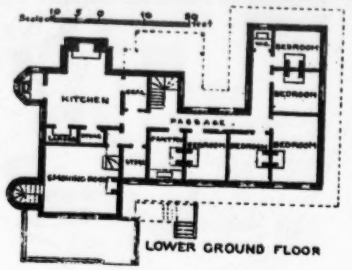
PHOTO-LITHO. SPRAGUE & CO., 22, MARTINS LANE, CANNON ST. LONDON, E.C.

A BUNGALOW.—Mr. R. A. Briggs, A.R.I.B.A., Architect.

No. 1754, Royal Academy Exhibition, 1891



PRINCIPAL FLOOR



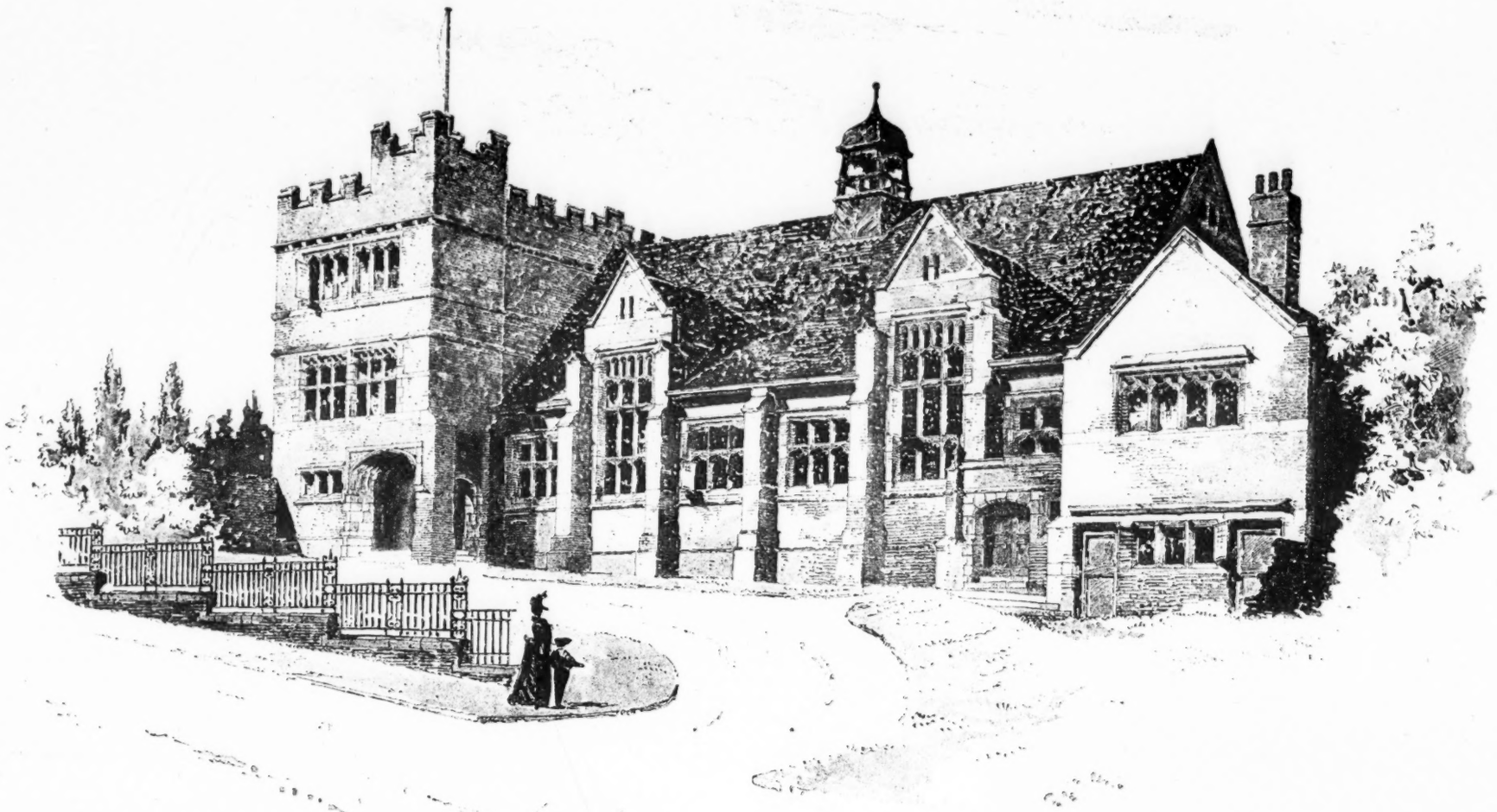
LOWER GROUND FLOOR

PHOTO-LITHO. SPRAGUE & Co. 22. MARTINS LANE CANNON ST. LONDON E.C.

PROPOSED BUNGALOW HOUSE, SURREY.—Mr. R. A. Briggs, A.R.I.B.A., Architect.

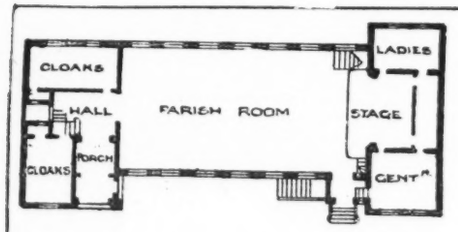
No. 1801, Royal Academy Exhibition, 1891.

ST MATTHEWS : UPPER CLAPTON
: NEW CHURCH ROOM :



Arnold D. Mitchell
Architect
16 Finsbury Circus E.C.

No. 1737, *Royal Academy Exhibition*, 1891.



St Matthew's : Clapton
· New Parish Room ·

No. 1748, *Royal Academy Exhibition*, 1891.